

BIOLOGY 5TH EDITION LESSON PLAN OVERVIEW

Day(s)	Topic	Objectives	Pages	Support Materials	Biblical Worldview
Chapter 1: The Living Creation					
1–2	1A The Study of Life	<ul style="list-style-type: none"> Evaluate the presuppositions about life that lie at the heart of the abortion debate. Summarize the Creation narrative in their own words. Summarize the six attributes of life in their own words. Create a graphic organizer that relates the six attributes of life to specific biological structures and functions. Diagram the sources of energy for a living organism. Diagram the sources of information for a living organism. 	3–9	Extra Content: Extra Case Study	<ul style="list-style-type: none"> Sanctity of human life Relationship between God’s Word and science God and Creation (the event) Fall of creation Redemption of the world Physical and spiritual life God’s care for creation
3–4	1B Views of Life	<ul style="list-style-type: none"> Relate observations, interpretations, and models. Compare the changing nature of science with the unchanging nature of God and His Word. Determine when science is most useful despite its limitations. Compare views of life and science that different people have. 	10–15		<ul style="list-style-type: none"> Science in light of a biblical worldview Dominion through modeling
5	Lab 1A, <i>A Method to This Madness</i>				
6	1C Balance of Life	<ul style="list-style-type: none"> Relate the work of conservation to obeying Genesis 1:28 and Matthew 22:39. Explain the balance between preserving the earth’s resources and using them to help other people. Compare the positive and negative ways that the tools of biology can be used. Give examples of how the sciences can work together to fulfill the Creation Mandate. 	16–18		<ul style="list-style-type: none"> Using biology to practice dominion Glorifying God through science
	Chapter 1 Review				
7	Lab 1B, <i>More Than Meets the Eye</i>				
8	Chapter 1 Test				

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Chapter 2: The Chemistry of Living Things					
9–10	2A Matter, Energy, and Life	<ul style="list-style-type: none"> • Compare the different types of energy using examples. • Compare chemical and physical changes using examples. • Compare ionic and covalent compounds. • Create a hierarchy chart including the terms <i>matter</i>, <i>atom</i>, <i>element</i>, <i>proton</i>, <i>neutron</i>, <i>electron</i>, <i>compound</i>, and <i>molecule</i>. 	22–27		<ul style="list-style-type: none"> • Sustaining power of God in nature • God’s role both in creating and sustaining life
11	Lab 2A, <i>Lost in the Woods</i>				
12	2B The Chemical Processes of Life	<ul style="list-style-type: none"> • Relate Brownian motion to diffusion and the dissolving process. • Label the activation energy, reactants, and products on an energy diagram of both exothermic and endothermic reactions. • Compare the actions of enzymes and inhibitors. • Give examples of how people can use chemistry to understand and help living things, especially people. 	28–33		<ul style="list-style-type: none"> • Declaring God’s glory through good stewardship
13–14	2C Biochemistry	<ul style="list-style-type: none"> • Demonstrate how water is essential to life’s design. • Define an organic compound in their own words. • Describe the difference between an organic compound and other kinds of compounds. • Give one example of a carbohydrate, protein, lipid, sugar, and nucleic acid, and describe how their chemical structures are different. 	34–39		
	Chapter 2 Review				
15	Lab 2B, <i>Bubbles of Life</i>				
16	Chapter 2 Test				

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Chapter 3: Ecology					
17	3A Our Living Planet	<ul style="list-style-type: none"> Distinguish between ecosystems and the biosphere. Explain how biotic and abiotic factors work together to sustain life. 	45–49		<ul style="list-style-type: none"> God’s design of and care for living things Fall of creation Future complete redemption Man’s responsibility to be good stewards of God’s creation
18–19	3B Biomes	<ul style="list-style-type: none"> Classify a biome on the basis of its biotic and abiotic factors. Compare biomes and vertical zonation. 	50–55	Extra Content: Kilimanjaro Climate Zones	
20	3C Web of Life	<ul style="list-style-type: none"> Use a food web and an ecological pyramid to represent the relationships between producers and consumers in an ecosystem. Give examples of neutralism, competition, predation, parasitism, commensalism, and mutualism. 	56–61		
21	Lab 3A, <i>Tag!</i>				
	Lab 3B, <i>Must You Be So Competitive?</i>				
22	Chapter 3 Review				
23	Chapter 3 Test				
Chapter 4: Interacting with the Biosphere					
24–25	4A Sustainability	<ul style="list-style-type: none"> Trace the flow of materials through the water, oxygen, carbon, and nitrogen cycles. List and give examples of the factors that either limit or encourage population growth and biodiversity. Distinguish between primary and secondary succession. Defend a biblical view of the predictability and orderliness of ecosystems. 	66–75		<ul style="list-style-type: none"> Dominion through modeling Reference to the water cycle in the Bible
26	Lab 4A, <i>Forest or Farm?</i>				
27–28	4B The Human Niche	<ul style="list-style-type: none"> Explain from a biblical worldview the role that people play in managing the earth. Evaluate arguments about changes in the environment. Identify evolutionary bias in the field of ecology. Relate different fields of science to ecology. 	76–81	Webquest Rubric	<ul style="list-style-type: none"> Need for balance in man’s stewardship of the earth God’s care and provision for His creation A biblical look at ecological issues (greenhouse gases, ecological footprints, climate change, and extinction rates) Man’s responsibility to be good stewards of God’s creation
	Chapter 4 Review				
29	Lab 4B, <i>Hale Hardwoods or Sickly Cedars?</i>				
30	Chapter 4 Test				

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Chapter 5: Cytology					
31–32	5A The Structure and Function of Cells	<ul style="list-style-type: none"> • Relate the modern cell theory to the changing nature of models. • Use a graphic organizer to compare unicellular, multicellular, and colonial organisms. • Differentiate between prokaryotic and eukaryotic cells. • Illustrate a typical cell and describe the functions of its parts. • Suggest ways to use the complexity of the cell to better help others. 	89–94		<ul style="list-style-type: none"> • God’s role as Creator of all of life • Man’s role in obeying God and serving others • The purpose of science as modeling and not ultimate truth • Interpreting data on the basis of worldview
33	Lab 5A, <i>Dwell on the Cell</i>				
34	5B The Cell Environment	<ul style="list-style-type: none"> • Describe how cells in a particular cell environment maintain balance. • Compare the ways that solutions affect cells. • List and illustrate the different ways that molecules are transported across the cell membrane. 	95–101		<ul style="list-style-type: none"> • Serving God as a medical researcher
35	Lab 5B, <i>The Leaking Lab</i>				
	Chapter 5 Review				
36	Chapter 5 Test				
Chapter 6: Energy and Information in the Cell					
37	6A Metabolism	<ul style="list-style-type: none"> • Explain how energy is stored in ATP molecules. • Track the flow of energy from ATP to ADP. 	106–8		<ul style="list-style-type: none"> • Evidence of design at the molecular level
38	Lab 6A, <i>No Swimming Today</i>				
39–40	6B DNA and Protein Synthesis	<ul style="list-style-type: none"> • Compare the structures of DNA and RNA. • Summarize the model of DNA replication. • Differentiate between transcription and translation. • Explain how a protein comes from DNA. 	109–15	Webquest Rubric	<ul style="list-style-type: none"> • Using science to help others
	Chapter 6 Review				
41	Lab 6B, <i>Hidden Code</i>				
42	Chapter 6 Test				

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Chapter 7: Cell Processes					
43–44	7A Photosynthesis	<ul style="list-style-type: none"> • Relate photosynthesis to God's provision for life. • Give examples for exercising good and wise dominion over the process of photosynthesis. • Diagram the reactants and products of photosynthesis using a chemical equation. • Relate the roles of pigments, light, and chemical energy to the process of photosynthesis. • Outline the steps of the light-dependent and light-independent reactions. • Give examples of factors that affect photosynthesis 	118–22		<ul style="list-style-type: none"> • God's provision and care for His creation
<i>Lab 7A, Whatever Floats Your Leaf</i>					
45–46	7B Cellular Respiration and Fermentation	<ul style="list-style-type: none"> • Trace the flow of energy from glucose in glycolysis to ATP in the electron transport chain. • List the amounts of ATP produced in each step of aerobic respiration. • Differentiate between aerobic respiration and fermentation. • Explain the roles of aerobic respiration and fermentation in the environment. • Relate cellular respiration to its effects on the environment. • Show how God's care for creation is seen in the current models of cell processes. 	122–28		<ul style="list-style-type: none"> • Dominion through modeling
47	<i>Lab 7B, On the Road to Alternative Fuels</i>				
	Chapter 7 Review				
48	Chapter 7 Test				

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Chapter 8 Basic Genetics					
49	8A Cell Division	<ul style="list-style-type: none"> • Differentiate between a gene and a chromosome. • Differentiate between a sex chromosome and an autosome. • Relate DNA to chromosomes. • Trace the growth and reproduction of a cell through the cell cycle. • Draw the phases of mitosis and meiosis. • Compare mitosis and meiosis. 	132–37		<ul style="list-style-type: none"> • Good stewardship of animal life
50	Lab 8A, <i>Let's Split</i>				
51–52	8B The Inheritance of Traits	<ul style="list-style-type: none"> • List the three genetic principles proposed by Mendel. • Differentiate between recessive and dominant traits. • Set up monohybrid and dihybrid crosses with Punnett squares. • Explain the differences between the kinds of genetic inheritance. • Explain the worldview implications of correctly understanding the genetics of skin color. 	137–46	Lab 8B, <i>The Punnett Square Dance</i> : Part 1 Simple Dominance Part 2 Incomplete Dominance Part 3 Codominance Extra Content: Branch Diagrams	<ul style="list-style-type: none"> • Evidence of God's design at the molecular level • Effect of the Fall at the molecular level • Importance of understanding biblical principles as they apply to scientific issues • Ethical issues related to care for animal life
53	8C Gene Expression	<ul style="list-style-type: none"> • Explain how genes control cell development. • Relate the environment to gene expression. • Differentiate between embryonic and somatic stem cells. • Give biblical support for ethically using animals to benefit people. 	148–51	(Lab 8B, <i>continued</i>): Part 4 Multiple Alleles Part 5 Polygenic Inheritance	<ul style="list-style-type: none"> • Using scientific discoveries to deal with the consequences of the curse • Evaluating research and technology in light of Scripture
54	Chapter 8 Review			(Lab 8B, <i>continued</i>): Part 6 Sex-linked Traits Extra Content: Question 28 Genetic Graphic Organizer	
55	Chapter 8 Test				

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Chapter 9 Advanced Genetics					
56	9A Population Genetics	<ul style="list-style-type: none"> List the factors that affect the gene pool. List the different sources of genetic variation. Differentiate between genetic drift and gene flow. Evaluate the models of genetic change from a biblical viewpoint. Analyze how genetic load can affect the genetic variability of a population. 	157–60		<ul style="list-style-type: none"> Using research and biotechnology to serve people Variety in creation as part of God’s design for it Christian worldview in understanding changes in populations
57–58	9B Mutations	<ul style="list-style-type: none"> Differentiate between chromosome and gene mutation. Create a model that illustrates the three types of point mutations. Explain how a gene mutation can affect a cell. Explain how nondisjunction affects the chromosome number. Give examples of the ways that a mutation can be expressed in an organism. 	162–67		<ul style="list-style-type: none"> Stewardship in agriculture Population growth as an aid to dominion Value of all human life Using technology to improve human life
59	Lab 9A, <i>Fix It!</i>				
60	9C Genetic Engineering	<ul style="list-style-type: none"> Give support for the importance of gene sequencing. Diagram how a gene can be transferred from one organism to another. List and explain four ways that DNA can be manipulated. Evaluate the benefits and dangers of DNA manipulation. 	168–73	Webquest Rubric	<ul style="list-style-type: none"> Evaluating research in the light of the Bible Using scientific discoveries to glorify God and help others
61–62	Lab 9B, <i>Whodunit?</i>				
	Chapter 9 Review				
63	Chapter 9 Test				

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Chapter 10 When Worldviews Collide					
64–65	10A The Origins Question	<ul style="list-style-type: none"> Summarize the history of evolutionary thinking. List and define the three primary supports for modern evolutionary theory. Evaluate popular nonliteral interpretations of the Creation account. Recognize the two main differences between biblical creation and evolution. 	178–87	Lab 10A, <i>In Darwin's Own Words</i>	<ul style="list-style-type: none"> Biblical worldview versus naturalistic worldview Supremacy and inerrancy of Scripture Importance of and support for a literal interpretation of Scripture Results of believing evolutionary theory Death as a result of the Fall Catastrophic results of the Flood Role of the Flood in fossil formation God's creation of all life Need for faith in Christ Creationist presuppositions versus evolutionist presuppositions
66–67	10B Change in Nature	<ul style="list-style-type: none"> Explain the different ways that populations of organisms can change. Differentiate between adaptation and evolution. Evaluate the different supports for evolution in light of a biblical worldview. 	187–200	Webquest Rubric	<ul style="list-style-type: none"> Infallibility of the Bible Scripture as the ultimate, unchanging standard God's Word versus man's wisdom Relevance of the literal Creation account to the Christian faith Intelligent design and biblical creationism God's design and efficiency in creation Response to nonliteral interpretations of Creation God's merciful plan of redemption Special creation of man and God's care for him God's glory in creation
68	Chapter 10 Review			Lab 10B, <i>Worldview Sleuthing</i>	
69	Chapter 10 Test				

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Chapter 11 Classifying Life					
70–71	11A Taxonomy	<ul style="list-style-type: none"> • Discuss the importance of classifying living things. • Associate classification with the model-making nature of biology. • List the eight levels of taxonomy. • Create a graphic organizer illustrating the identifying traits and examples of the seven kingdoms. • Construct a scientific name. 	207–12	Lab 11A, <i>The Key Concept</i>	<ul style="list-style-type: none"> • God’s design in creation • Use of knowledge and opportunity as a means of practicing good dominion • Creationist view of speciation • Importance of evaluating things on the basis of Scripture and its worldview
72–73	11B Unity and Diversity	<ul style="list-style-type: none"> • Differentiate between traditional and modern classification. • Respond to the evolutionary argument that classification can be used to support evolution. 	213–17	Lab 11B, <i>All Myxed Up</i>	<ul style="list-style-type: none"> • God’s design in creation • Variety as an expression of God’s creativity
	Chapter 11 Review				
74	Chapter 11 Test				
Chapter 12 Prokaryotes and Viruses					
75–76	12A Prokaryotes	<ul style="list-style-type: none"> • Distinguish archaea from bacteria. • Draw the structure of a bacterium. • Summarize the different ways that bacteria can transfer their DNA. • Explain the function of bacteria in the environment. • Identify several diseases caused by bacteria. 	221–27		<ul style="list-style-type: none"> • Creationist presuppositions versus evolutionist presuppositions • Similarity in form or function as an evidence of God’s design • Success of pathogenic organisms as a result of the Fall and Curse
	Lab 12A, <i>Squeaky Clean</i>				
77–78	12B Viruses	<ul style="list-style-type: none"> • Identify viruses as carriers of genetic information. • Compare viruses to bacteria. • Label the structures of a virus. • Differentiate between a lytic and a lysogenic infection. • Identify useful applications of and diseases caused by viruses. 	228–33		<ul style="list-style-type: none"> • Advances in biotechnology as a means of caring for people • Disease as a result of sin
79	Lab 12B, <i>One Slick Solution</i>				
80	Chapter 12 Review				
81	Chapter 12 Test				

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Chapter 13: Protists and Fungi					
82–83	13A Kingdom Protozoa	<ul style="list-style-type: none"> • Explain kingdom protozoa's place in classification. • Use drawings or other models to depict the structures and movements of common protozoans. • Describe the different kinds of protozoan reproduction. • List several protozoans that are harmful to people and the environment. 	238–43		<ul style="list-style-type: none"> • Use of knowledge to improve people's lives • Managing pathogens to protect life • Serving with the discipline to bring God glory
<i>Lab 13A, Wee, Watery World</i>					
84	13B Kingdom Chromista	<ul style="list-style-type: none"> • Compare the two groups of protists using a graphic organizer. • Describe the different kinds of chromist reproduction. • Evaluate the evolutionary idea that multicellular organisms came from unicellular protists. • Describe how chromists contribute to life on Earth. 	244–47		<ul style="list-style-type: none"> • Creationist presuppositions versus evolutionist presuppositions • Variety as an expression of God's creativity
85–86	13C Kingdom Fungi	<ul style="list-style-type: none"> • Classify fungi on the basis of their reproduction. • Draw and label the structure of a mushroom. • Describe the ways that fungi reproduce. • Explain the relationship of algae and fungi in lichens. • Suggest both beneficial and harmful ways that fungi interact with the environment. 	248–54		<ul style="list-style-type: none"> • Serving with the discipline to bring God glory • The modeling nature of science • Questioning the evolutionary paradigm shaping current classification in biology
<i>Lab 13B, Zygo's a Fun Guy</i>					
87	Chapter 13 Review				
88	Chapter 13 Test				
Final Material					
89	Semester Exam Review				
90	Semester Exam				

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Chapter 14: Plant Classification and Structure					
91	14A Kingdom Plantae	<ul style="list-style-type: none"> Differentiate plants from other living organisms. Differentiate between the four types of plants. Relate plant size to tissue type. 	259–61		<ul style="list-style-type: none"> God’s design in His creation God’s care of His creation Good stewardship of God’s creation
92–93	14B The Structure of Plants	<ul style="list-style-type: none"> Relate the different types of plant cells and tissues to their function in plant organs. Diagram the structure of leaves, stems, and roots. Explain the function of leaves, stems, and roots. 	262–69		
94	Lab 14A, <i>Name that Plant</i>				
95–96	14C The Life Cycles of Plants	<ul style="list-style-type: none"> Describe the life cycles of bryophytes and ferns. Compare gymnosperm and angiosperm reproduction. Diagram the structure of a flower. Diagram the structure of a seed. Create a flow chart that illustrates the life cycle of an angiosperm. Evaluate using plants that are easily misused. 	270–79		<ul style="list-style-type: none"> Good stewardship of God’s creation God’s design in His creation
	Chapter 14 Review				
97	Lab 14B, <i>A Fruitful Lab</i>				
98	Chapter 14 Test				
Chapter 15: Plant Processes					
99	15A Transporting Nutrients	<ul style="list-style-type: none"> Discuss the theories for the movement of sap throughout a plant. Trace the path of water and minerals through a plant. Explain how nutrients from the soil enter a plant. Understand that scientific models are not truth and can and should be updated to incorporate new data. 	285–87	Lab 15B, <i>Too Salty?</i>	<ul style="list-style-type: none"> Good stewardship of God’s creation Modeling nature of science versus the eternity of God’s truth
100–101	15B Plant Responses	<ul style="list-style-type: none"> Explain the effects that different hormones have on plants. Relate plant growth to different stimuli in the environment. Describe the different ways that light affects plants. 	288–92		<ul style="list-style-type: none"> God’s care of His creation

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Chapter 15: Plant Processes <i>(continued)</i>					
102	Lab 15A, <i>Bananamania</i>				
103	15C Using Plants Wisely	<ul style="list-style-type: none"> Describe the different ways that plants can be produced vegetatively. List several ways that people use plants. Assess the importance of plants to biogeochemical cycles. Analyze, on the basis of a biblical worldview, the advantages and disadvantages of genetically modifying plants. 	293–98	Webquest Rubric	<ul style="list-style-type: none"> Man’s responsibility to be wise stewards of God’s creation God’s provision for His creation
Chapter 15 Review					
104	Chapter 15 Test				
Chapter 16: Invertebrates					
105	16A Kingdom Animalia	<ul style="list-style-type: none"> List the characteristics of animals and give examples. Use a T-chart to compare endotherms and ectotherms. Relate animal body plans and symmetry to germ layers. List and describe the different kinds of sexual reproduction in animals. Relate the different responses animals have to their environments and to each other. 	305–12		<ul style="list-style-type: none"> Wise management of God’s creation Man’s dominion over animals God’s care for His creation Living things reproduce after their own kind.
106–107	16B Sponges and Cnidarians	<ul style="list-style-type: none"> Describe the general characteristics of sponges. Explain how sponges feed and reproduce. Create a concept definition map that communicates the general characteristics of cnidarians. Describe how cnidarians feed and reproduce. Explain how sponges and cnidarians contribute to the environment. 	312–17		<ul style="list-style-type: none"> Wise stewardship of natural resources
Lab 16A, <i>The Immortals Next Door</i>					

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Chapter 16: Invertebrates (continued)					
108–109	16C Worms	<ul style="list-style-type: none"> • Differentiate between flatworms, roundworms, and segmented worms. • Describe the general characteristics of worms. • Explain how the three phyla of worms feed and reproduce. • Give examples of how we can manage and use worm populations in the environment. 	318–22		
	16D Mollusks	<ul style="list-style-type: none"> • Describe the general characteristics of mollusks. • Differentiate between bivalves, gastropods, and cephalopods. • Explain how mollusks reproduce. • Give examples of how mollusks interact with their environment. 	323–25		<ul style="list-style-type: none"> • Using stewardship to glorify God
110	Lab 16B, <i>Fish Tank Fiend!</i>				
111	16E Echinoderms	<ul style="list-style-type: none"> • Describe the general characteristics of echinoderms. • Compare the five classes of echinoderms using a graphic organizer. • Explain how echinoderms reproduce. • Give examples of how echinoderms interact with their environment. 	326–28		<ul style="list-style-type: none"> • Unique design in echinoderms as evidence for creation • Creation declares the glory of God.
	Chapter 16 Review				
112	Chapter 16 Test				
Chapter 17: Arthropods					
113	17A Arthropod Introduction and Chelicerates	<ul style="list-style-type: none"> • Describe the general characteristics of arthropods. • List the general characteristics of chelicerates. • Explain how chelicerates feed and reproduce. • Describe how chelicerates affect their environment. 	333–38		<ul style="list-style-type: none"> • Unexpected consequences of man's dominion efforts • Analyzing presuppositions
114–115	17B Crustaceans	<ul style="list-style-type: none"> • Differentiate crustaceans from other arthropods. • Explain how crustaceans feed and reproduce. • Give examples of how crustaceans exert influence on their environment. 	338–41		
	Lab 17A, <i>Take a Crack at Crayfish</i>				

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Chapter 17: Arthropods (continued)					
116	17C Insects	<ul style="list-style-type: none"> List the general characteristics of insects. Explain how insects feed and reproduce. Suggest ways to wisely control insects and use them in the environment to help people. 	341–47		<ul style="list-style-type: none"> God’s provision for His creation Managing God’s resources to meet the needs of His creatures
Chapter 17 Review					
117	Lab 17B, <i>Cricket Caper</i>				
118	Chapter 17 Test				
Chapter 18: Ectothermic Vertebrates					
119–120	18A Chordate Introduction and Fish	<ul style="list-style-type: none"> Describe the general characteristics of fish. Compare hagfish and lampreys to other fish. Differentiate between cartilaginous fishes and bony fishes. Trace the flow of oxygen through the circulatory system of a bony fish. Identify the major organs of the circulatory, nervous, digestive, excretory, and reproductive systems of a bony fish. 	351–57	Lab 18A, <i>Something Fishy Going On</i>	<ul style="list-style-type: none"> Humans created in the image of God Man’s responsibility to exercise informed, balanced dominion over all animal life Evidence of design in creation
121	18B Amphibians	<ul style="list-style-type: none"> Describe the general characteristics of amphibians. Identify the major organs of the circulatory, nervous, digestive, excretory, and reproductive systems of a frog. Recommend a way that amphibians can be biblically conserved. 	358–62		<ul style="list-style-type: none"> Making wise decisions in exercising dominion
122	18C Reptiles	<ul style="list-style-type: none"> List the structures of an amniotic egg and their functions. Describe the general characteristics of reptiles. Compare the four orders of reptiles. Identify the major organs of the circulatory, nervous, digestive, excretory, and reproductive systems of a reptile. 	363–69		<ul style="list-style-type: none"> God’s design and use of reptiles Dinosaurs in the Bible
Chapter 18 Review					
123	Finish Lab 18A, <i>Something Fishy Going On</i> . Complete Lab 18B, <i>Reptile Repasts</i>				
124	Chapter 18 Test				

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Chapter 19: Endothermic Vertebrates					
125–126	19A Birds	<ul style="list-style-type: none"> Describe the general characteristics of birds. Label the major organs of the circulatory, nervous, digestive, excretory, and reproductive systems of a bird. Explain how birds are designed for flight. Relate birds' beaks, wings, and feet to their environments. List several behaviors of birds. 	374–81	Lab 19A, <i>Our Fine, Feathered Friends</i>	<ul style="list-style-type: none"> Interpreting evidence on the basis of a Biblical worldview Structure and function of the bird's body as evidence of God's design
127–128	19B Mammals	<ul style="list-style-type: none"> Describe the general characteristics of mammals. Identify the major organs of the circulatory, nervous, digestive, excretory, and reproductive systems of a mammal. Compare the reproduction strategies of eutherians, monotremes, and marsupials. Compare the major orders of mammals. Suggest several ways that a scientist can produce useful science during an evolution-driven study. 	382–89		<ul style="list-style-type: none"> Structure and function of the bird's body as evidence of God's design Man's dominion over animals God's preservation of His creation
129	Lab 19B, <i>Why, It's Amazing!</i>				
130	Chapter 19 Review				
131	Chapter 19 Test				
Chapter 20: Protection					
132	20A The Study of You	<ul style="list-style-type: none"> Explain how humans are different from other living things. Differentiate between the kinds of tissues found in the human body. Summarize the function of each system in the human body. Evaluate how believers should view the study of the body. 	395–400		<ul style="list-style-type: none"> The meaning of man's being created in God's image Man as a spiritual being Exercising dominion in caring for human life—that of others and of ourselves The image of God in man marred by the Fall Man's sinful nature Developing an understanding of science from a biblical worldview
133	Lab 20A, <i>Chill Out!</i>				
134	20B The Integumentary System	<ul style="list-style-type: none"> List the layers that make up the integumentary system and their functions. Describe the purposes of the skin. Explain how each body system presents itself in the skin. 	401–4		<ul style="list-style-type: none"> Evidence of design in neural receptors

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Chapter 20: Protection (continued)					
135–136	20C The Lymphatic System and Immunity	<ul style="list-style-type: none"> List the tissues and organs of the lymphatic system. Describe what lymph does as it travels through the different systems of the body. Explain the role of the lymphatic system in immunity and homeostasis. Compare humoral and cell-mediated immunity. List several ways that the immune system can react. 	405–10	Lab 20B, <i>Are You Aware?</i>	<ul style="list-style-type: none"> Interpreting data from a biblical worldview Humans are fearfully and wonderfully created. Sin producing disease and suffering
	Chapter 20 Review				
137	Chapter 20 Test				
Chapter 21: Support and Movement					
138–139	21A The Skeletal System	<ul style="list-style-type: none"> Differentiate between the axial and appendicular skeletons. Label the main bones of the skeletal system on a diagram. Describe the structure of a bone. Differentiate between compact bone and spongy bone. Relate the different joint structures to their movements. Explain how a bone forms and is remodeled. 	415–20		<ul style="list-style-type: none"> Using science to practice dominion in helping people Structure and function of the human skeletal system as evidence of God’s design
140	Lab 21A, <i>Dry Bones</i>				
141–142	21B The Muscular System	<ul style="list-style-type: none"> Differentiate between the three kinds of muscle and describe their roles. Label the main muscles of the muscular system on a diagram. Illustrate the process of muscle movement on the cellular level, using drawings or a model. Describe how muscles use energy to contract. Explain how muscles rely on other muscles and body systems to operate. Evaluate the idea that combining different areas of science is a way to better solve problems and to help others. 	420–25		<ul style="list-style-type: none"> Exercising dominion to help improve the quality of life for others
143	Lab 21B, <i>I’m So Tired!</i>				
144	Chapter 21 Review				
145	Chapter 21 Test				

Day(s)	Topic	Objectives	Pages	Support Materials	Biblical Worldview
Chapter 22: Transport					
146–147	22A The Respiratory System	<ul style="list-style-type: none"> List the major organs of the respiratory system and describe their functions. Explain how gas is exchanged in the lungs. Diagram the process of breathing. List factors that affect breathing. 	430–33		<ul style="list-style-type: none"> Wise stewardship of the human body
148	Lab 22A, <i>Relax and Take a Deep Breath</i>				
149–150	22B The Circulatory System	<ul style="list-style-type: none"> List the major organs and tissues of the circulatory system and describe their functions. Describe the structure of the heart. Describe the purpose of each part of blood. Differentiate between the flow of blood through an artery and through a vein. Relate the circulatory system to the respiratory system. Trace the flow of oxygen and carbon dioxide through the heart and lungs. Differentiate between systemic and pulmonary circulation. 	434–39		<ul style="list-style-type: none"> Our bodies are not our own. Caring for the body for God's glory
151	Lab 22B, <i>Feeling the Pressure</i>				
152	Chapter 22 Review				
153	Chapter 22 Test				
Chapter 23: Energy					
154–155	23A The Digestive System	<ul style="list-style-type: none"> List the six nutrients the body needs and describe their roles. Explain how the body takes in, distributes, and eliminates nutrients. Compare mechanical and chemical digestion. List the organs of the digestive system and describe their functions. Explain how digestion provides the glucose needed for cellular respiration. Suggest ways to help people take care of their bodies by balancing their food intake with their activity level. 	444–50		<ul style="list-style-type: none"> Caring for our bodies as good stewardship Eating and exercising to glorify God

Day(s)	Topic	Objectives	Pages	Support Materials	Biblical Worldview
Chapter 23: Energy (continued)					
156	Lab 23, <i>A Calorimetry in a Can</i>				
157	23B The Urinary System	<ul style="list-style-type: none"> List the organs of the urinary system and describe their functions. Explain how the kidneys filter and recycle the materials in blood. List organs from other body systems that are involved in excretion. Explain why drinking water helps the body maintain homeostasis. 	452–55		<ul style="list-style-type: none"> Keeping your body healthy, so that you can glorify the Lord in your best service
158–159	Lab 23B, <i>What a Waste!</i>				
	Chapter 23 Review				
160	Chapter 23 Test				
Chapter 24: Communication					
161–162	24A The Nervous System	<ul style="list-style-type: none"> Differentiate between the central nervous system and the peripheral nervous system. Trace the flow of a signal through a neuron. Label the parts of the brain. Explain how the hypothalamus acts as the link between the nervous and endocrine systems. Explain how the three types of neurons work together in a reflex arc. 	459–65		<ul style="list-style-type: none"> Improving the quality of life of God's image bearers God's design of the nervous system
163–164	24B The Sensory Organs	<ul style="list-style-type: none"> Describe the major structures of the eye. Describe the major structures of the ear. Describe the purpose of each kind of sensory receptor. Describe how each kind of sensory receptor works with sensory organs. Relate the importance of sensing the world to a person's growth and development. Relate the ability to feel pain to God's care for mankind. 	465–73		<ul style="list-style-type: none"> Preventing disease to improve the quality of human life
165	Lab 24A, <i>Sensational!</i>				

Day(s)	Topic	Objectives	Pages	Support Materials	Biblical Worldview
Chapter 24: Communication <i>(continued)</i>					
166–167	24C The Endocrine System	<ul style="list-style-type: none"> • Differentiate between the speed of the nervous system and that of the endocrine system. • Explain how steroid and nonsteroid hormones communicate with cells. • Describe the function of the different glands and the hormones they secrete. • Explain how glands are controlled by negative feedback. • Describe how hormones prepare the body for puberty. • Explain how hormones are affected by our fallen nature. 	473–78		<ul style="list-style-type: none"> • Man as a spiritual being • God’s grace is sufficient to meet all our needs.
	Chapter 24 Review				
168	Chapter 24 Test				
169–171	Lab 24B, <i>Rat Recap</i>				
Chapter 25: Reproduction, Growth, and Health					
172–173	25A The Reproductive System	<ul style="list-style-type: none"> • Describe the function of the male reproductive organs. • Describe the function of the female reproductive organs. • Explain how an ovum is produced, fertilized, and transported from an ovary to the uterus. • Explain how sin and the Curse affect human sexuality and reproduction. 	483–91	Lab 25A, <i>Unusual Development</i>	<ul style="list-style-type: none"> • Fulfilling the Creation Mandate to have children • Man is God’s highest creation. • God alone has the authority to determine what is good. • The image of God in man marred by the Fall • Biblical principles of marriage • Relationship between man and wife as an example of the relationship between Christ and the church • The Bible’s challenge to have a pure life • Christ’s provision of Redemption • Avoiding situations that can lead to temptation • The value of human life • The Bible and abortion • Grace to deal with suffering

Day(s)	Topic	Objectives	Pages	Support Materials	Biblical Worldview
Chapter 25: Reproduction, Growth, and Health <i>(continued)</i>					
174–175	25B Human Growth and Development	<ul style="list-style-type: none"> Trace the development of an embryo from implantation to birth. Compare the body of a child to that of an infant. Describe the changes in a person's body associated with puberty. Associate the changes in puberty with the function of the endocrine system. Predict how a student's body will change as he gets older. 	491–97	Lab 25B, <i>Fast Food Fact-Finding</i>	<ul style="list-style-type: none"> The Bible's challenge to have a pure life Thinking about death from a biblical perspective Sex and gender are designed by God to be aligned. God's way is always best. God determines the number of our days. Christians will spend an eternity in heaven. Christ has conquered death.
176–177	25C Balanced Living	<ul style="list-style-type: none"> List what substances people can ingest that affect the body's homeostasis. Explain how exercise, sleep, and hygiene are linked to maintaining homeostasis. Relate the importance of mental health and healthy relationships to physical health. Evaluate whether the decisions that people make regarding health are based on God's Word. 	497–502		<ul style="list-style-type: none"> Our bodies are the temple of the Holy Spirit. We should do all to the glory of God. Christ alone satisfies my needs. Human life is physical, mental, social, and spiritual. Biblical principles of marriage Our hope can be found only in Christ.
	Chapter 25 Review				
178	Chapter 25 Test				
Final Material					
179	Semester Exam Review				
180	Semester Exam				