Lesson Plan Overviews

| Lesson | TE pages | ST pages | AM pages | Objectives and Christian Worldview | Process Skills |
| --- | --- | --- | --- | --- | --- |
| 1 | 2–3 | 1–2 | 1 | • Define worldview  • List characteristics of a Christian worldview  • Apply a Christian worldview to science |  |
| Chapter 1: Living Things | | | | | |
| 2 | 4–7 | 3–5 | 3 | • Recognize the interrelationship of science concepts  • Explain that a wildlife manager uses wisdom  • Apply the concept of wisdom to each student’s responsibilities  God as source of all wisdom  God’s use of creation for His glory |  |
| 3 | 8–11 | 6–9 | 4 | • Identify the parts of an ecosystem  • Identify the basic needs of living things  • Recognize that basic needs are met through resources  • Name an example of competition  People as God’s special creation  God’s variety in creation  God’s provision for His creation |  |
| 4 | 12–13 |  | 5–6 | Answers in Genesis  • Explain why it is necessary to look at the world with a biblical perspective  • Explain from the Bible the sources of food for both people and animals before the Fall  • Analyze different kinds of teeth through the lens of Scripture |  |
| 5–6 | 14–17 | 10–13 | 7–8 | • List ways that God provides food for plants and animals  • Describe how plants get food  • Identify characteristics animals use to get food  • Identify types of shelters animals use  • Describe how working together benefits some animals |  |
| 7 | 18–19 |  | 9–10 | Science Skill: A Science Experiment  • Use a scientific method |  |
| 8–9 | 20–21 | 14–15 | 11–12 | Activity: Copying Nature  • Model different kinds of bird beaks  • Relate the results to actual birds  • Communicate information to other students  God’s provision for His creation  Imitation of creation by people | Communicating  Using models  Inferring  Classifying |
| 10–11 | 22–25 | 16–19 | 13–16 | • Describe adaptations from a Christian worldview  • Identify camouflage, mimicry, migration, and hibernation as ways animals survive  • Name some examples of camouflage, mimicry, migration, and hibernation  Consequences of sin on God’s perfect creation  The Flood’s effect on the earth |  |
| 12 | 26–27 | 20–21 | 17–18 | Activity: Hiding and Finding  • Observe how camouflage works  • Record and interpret data | Recording and interpreting data  Using numbers  Inferring  Communicating |
| 13–14 | 28 | 22 |  | Exploration: Striving to Survive  • Research an endangered plant or animal  • Write about an endangered plant or animal  • Give an oral presentation with a visual  People as stewards of God’s creation |  |
| 15 | 29–31 | 23–25 | 19 | • Recognize that each living thing has an effect on its environment  • Infer that increased development often results in decreased habitats for plants and animals  • Identify pollution as anything that makes the water, air, or land dirty  People as stewards of the earth’s resources  God’s creation for mankind’s enjoyment  God’s provision for His creation |  |
| 16 | 32 | 26 | 20 | **Chapter Review**  • Recall concepts and terms from Chapter 1  • Apply knowledge to everyday situations  People as stewards of God’s creation |  |
| 17 | 32 |  |  | Chapter 1 Test  • Demonstrate knowledge of concepts taught in Chapter 1 |  |
| Chapter 2: Insects and Spiders | | | | | |
| 18 | 33 | 27 | 21 | • List ways that a beekeeper uses wisdom  • Explain how beekeeping fits into a Christian worldview of science  • Defend the claim that keeping bees is an activity that pleases God |  |
| 19 | 34–35 | 28–29 | 22 | • Recognize that arthropods are one kind of invertebrate  • Explain why an insect is an arthropod  • Identify insects as the largest group of arthropods  • Identify parts of an insect |  |
| 20–21 | 36–37 | 30–31 | 23–24 | Exploration: Insect Collection  • Identify insects  • Record observations about insects  • Organize collected insects in a display |  |
| 22–23 | 38–41 | 32–35 | 25–26 | • List ways that God gives each insect what it needs to survive in its ecosystem  • Identify ways insects protect themselves  • Name insects that have chewing mouthparts  • Name insects that have sucking mouthparts |  |
| 24–25 | 42–43 | 36–37 | 27–28 | Activity: Amazing Discovery  • Make a model of an imaginary insect  • Apply information about insects and environments  • Use and define terms in context  God’s variety in creation  People as God’s image-bearers | Defining operationally  Making and using models  Communicating |
| 26–27 | 44–45 | 38–39 | 29–31 | • Name two insects that go through incomplete metamorphosis  • Describe the stages of incomplete metamorphosis  • Name two insects that go through complete metamorphosis  • Describe the stages of complete metamorphosis |  |
| 28 | 46–49 | 40–43 | 32 | • Recognize that some insects live and work together in groups  • Describe some ways honeybees work together  • Compare different types of ants  • Name some jobs that members of an insect colony have  God’s perfect design |  |
| 29–30 | 50–51 | 44–45 | 33–34 | Activity: What’s for Lunch?  • Observe and compare the ants’ responses to different foods  Christians’ use of science to show God’s love to others | Observing  Classifying  Communicating |
| 31 | 52–53 |  | 35–38 | Study Skill: PQ3R  • Use the PQ3R method to read informational text |  |
| 32–33 | 54–57 | 46–49 | 39 | • Compare the bodies of insects and spiders  • Describe some ways spiders get their food  • Identify two poisonous spiders  God’s design of the smallest creatures |  |
| 34 | 58 | 50 | 40 | **Chapter Review**  • Recall concepts and terms from Chapter 2  • Apply knowledge to everyday situations  People as stewards of God’s creation |  |
| 35 | 58 |  |  | **Chapter 2 Test**  • Demonstrate knowledge of concepts taught in Chapter 2 |  |
| Chapter 3: Plants | | | | | |
| 36 | 59 | 51 | 41 | • Describe the goals of a landscape architect  • Explain how a landscape architect reaches these goals  • Justify the work of a landscape architect from Genesis 1:28 |  |
| 37–38 | 60–63 | 52–55 | 42 | • Identify and describe parts of a flower  • Explain when pollination occurs  • Name three ways plants can be pollinated  God’s creation for the enjoyment of people  God’s provision for His creation  People as stewards of God’s creation |  |
| 39 | 64–66 | 56–58 | 43–44 | • Recognize that a fruit is the part of a plant that contains seeds  • Name four ways seeds can be dispersed  • Identify the parts of a seed  Seeds as an illustration of God’s design |  |
| 40–41 | 67 | 59 |  | Exploration: Find that Seed!  • Observe seeds in fruits  • Record information about seeds |  |
| 42 | 68–70 | 60–62 | 45–49 | • Identify some conditions a seed needs to germinate  • Describe the life cycle of a plant  • Name some ways plants reproduce without seeds  God’s Word as the only true source of guidance  Human life as an illustration of the Bible’s pattern of sowing and reaping |  |
| 43 | 71–72 |  | 50 | Science Skill: Measuring Mass and Volume  • Measure mass to the nearest gram  • Measure volume using milliliters |  |
| 44 | 73–74 | 63–64 | 51–52 | Activity: Destination Germination  • Experiment to test a hypothesis  • Infer conditions needed for green beans to germinate  People’s responsibility to glorify God | Hypothesizing  Observing  Inferring  Identifying and controlling variables  Collecting and recording data |
| 45–46 | 75–77 | 65–67 | 53–54 | • Describe some ways botanists classify plants  • Identify a fern as a plant that reproduces by spores  • Differentiate between the locations of seeds in flowering plants and in conifers  God’s perfect design |  |
| 47–48 | 78–79 | 68–69 | 55–56 | Activity: Classifying Leaves  • Classify leaves by chosen criteria  • Communicate classification criteria to others | Classifying  Observing  Communicating |
| 49 | 80 | 70 | 57 | **Chapter Review**  • Recall concepts and terms from Chapter 3  • Apply knowledge to everyday situations  Interrelationship of parts of creation |  |
| 50 | 80 |  |  | **Chapter 3 Test**  • Demonstrate knowledge of concepts taught in Chapter 3 |  |
| Chapter 4: Forces and Machines | | | | | |
| 51 | 82–85 | 71–73 | 59 | • Recognize the interrelationship of science concepts  • Explain how movers use machines to make work easier and safer  Christians’ use of science to show God’s love to others |  |
| 52–53 | 86–89 | 74–77 | 60 | • Identify gravity and friction as forces  • Name examples of how friction is helpful  • Describe relationships between forces and movement  • Describe how the amount of work done is related to the amount of force and distance |  |
| 54–55 | 90–91 |  | 61–62 | Exploration: Make a Machine  • Design a plan to solve a problem  • Apply knowledge of simple machines  • Summarize the function of the diagram in writing  • Produce a diagram  Christians’ use of science to show God’s love to others |  |
| 56–57 | 92–95 | 78–81 | 63–64 | • Explain how simple machines make work easier  • Differentiate between the effort and the load  • Describe kinds of levers  • Name examples of different levers |  |
| 58 | 96–97 | 82–83 | 65–66 | Activity: How Much Effort?  • Experiment to determine how the position of the fulcrum affects the amount of effort  • Predict how many pennies are needed to balance a lever when the fulcrum is in given positions  Christians’ use of science to show God’s love to others | Predicting  Experimenting  Identifying variables  Inferring |
| 59 | 98–101 | 84–87 | 67 | • Use a wheel and axle to show how distance and force are related  • Recognize that gears are a special kind of wheel and axle  • Identify where the load and effort are when a fixed pulley is used  • Explain how adding movable pulleys to a block and tackle decreases the effort needed  • Name some examples of wheel and axles and pulleys  People created in God’s image |  |
| 60 | 102–3 | 88–89 | 68–70 | • Identify inclined planes, screws, and wedges as simple machines  • Name examples of inclined planes, screws, and wedges  People as stewards of God’s creation  Imitation of creation by people  People to serve God with work |  |
| 61 | 104–5 |  | 71–72 | Answers in Genesis  • Conclude from the Bible record that ancient people were intelligent  • Infer the possible roles of simple machines in the construction of Noah’s ark  • Describe the ark as a picture of Jesus Christ and salvation |  |
| 62 | 106–7 | 90–91 | 73 | Activity: Vroom, Vroom!  • Infer the relationship between force and work  • Compare the results of changing variables | Identifying and controlling variables  Hypothesizing  Experimenting  Inferring |
| 63 | 108 | 92 | 74 | **Chapter Review**  • Recall concepts and terms from Chapter 4  • Apply knowledge to everyday situations |  |
| 64 | 108 |  |  | Chapter 4 Test  • Demonstrate knowledge of concepts taught in Chapter 4 |  |
| Chapter 5: Electricity and Magnetism | | | | | |
| 65 | 109 | 93 | 75 | • Describe how a power-line worker works safely  • Defend the claim that we should be concerned about the safety of other people  • Create some rules concerning safety around electricity for your class  Christians’ use of science to show God’s love to others |  |
| 66–67 | 110–13 | 94–97 | 76 | • Identify that all matter is made up of small particles  • Identify when an object is positively or negatively charged or neutral  • Describe static electricity  • Describe what happens when different charges are brought near each other  People as stewards of God’s creation |  |
| 68–69 | 114–17 | 98–101 | 77–80 | • Differentiate between current electricity and static electricity  • Contrast conductors, insulators, and resistors  • Differentiate between a series circuit and a parallel circuit  • Identify the two parts of a circuit  Christians’ use of science to show God’s love to others  People as stewards of God’s creation |  |
| 70 | 118–19 | 102–3 | 81 | Activity: Conductors Needed  • Predict whether items are conductors or insulators  • Form a generalization about the types of materials that are conductors | Defining operationally  Predicting  Experimenting  Recording data |
| 71 | 120–22 | 104–6 | 82 | • Form generalizations about the types of materials that are attracted to magnets  • Identify the place on a magnet where magnetism is the strongest  • Identify uses of magnets  People as stewards of God’s creation |  |
| 72–74 | 123–25 | 107 | 83–84 | Study Skill: Keyword Search  • Understand that the words chosen to type into a search engine have a direct connection to the sources that are suggested by their results  • Practice converting questions to a set of keywords for use in developing queries  Exploration: Magnetic Search  • Identify search terms and create queries for research |  |
| 75 | 126–27 | 108–9 | 85–86 | Activity: How Strong Is Your Magnet?  • Test the strengths of the magnetic fields of magnets  • Test the fact that the magnetic fields are strongest at the poles of a magnet | Recording data  Experimenting  Observing  Inferring  Defining operationally |
| 76 | 128–31 | 110–13 | 87–89 | • Explain why electromagnets are temporary magnets  • List some uses for electromagnets  • Describe two relationships between magnetism and electricity  • Describe how a generator works  Interrelationship of the parts of creation testifies of God’s design  God-given curiosity of people  Responsibility of people to glorify God |  |
| 77 | 132 | 114 | 90 | Chapter Review  • Recall concepts and terms from Chapter 5  • Apply knowledge to everyday situations |  |
| 78 | 132 |  |  | Chapter 5 Test  • Demonstrate knowledge of concepts taught in Chapter 5 |  |
| Chapter 6: Light | | | | | |
| 79 | 133 | 115 | 91 | • Defend the importance of work for a Christian  • Describe ways that a photographer uses light  • Create images using more and less light  People to serve God with work |  |
| 80–81 | 134–37 | 116–19 | 92–93 | • Recognize that light travels in a straight line  • Identify luminous objects  • Differentiate between transparent, translucent, and opaque objects  God as Master of creation  God’s provision for His creation  Jesus as the true light |  |
| 82 | 138–39 | 120–21 | 94–96 | • Identify the location of a light source based on the position of a shadow  • Explain how shadows can be used to tell time  God as Master of creation |  |
| 83 | 140–41 |  |  | Science Skill: Measuring Length  • Measure length to the nearest centimeter |  |
| 84 | 142–43 | 122–23 | 97–98 | Activity: Shadows Big and Small  • Demonstrate that light travels in straight lines  • Summarize the relationship between a light source and shadows produced | Inferring  Measuring  Experimenting  Collecting and recording data |
| 85–86 | 144–47 | 124–27 |  | • List the colors of the visible spectrum  • Explain why an object appears to be a certain color  • Explain why a straight object in a glass of water may appear bent  God’s provision for His creation  God keeps His promises |  |
| 87 | 148–51 | 128–31 | 99–102 | • Identify the parts of the eye and their functions  • Sequence how light travels through the eye  • Differentiate between farsighted vision and nearsighted vision  • Compare how light is refracted in different kinds of lenses  Christians’ use of science to show God’s love to others |  |
| 88–89 | 152 | 132 |  | Exploration: I Spy My Eye  • Make a model of an eye  • Demonstrate knowledge of the parts of an eye  Wonder of God’s creation |  |
| 90 | 153 | 133 | 103 | Exploration: Seeing Things More Closely  • Observe an object through several magnifying glasses  • Draw a detailed representation of an object  • Compare and contrast observations |  |
| 91 | 154 | 134 | 104 | Chapter Review  • Recall concepts and terms from Chapter 6  • Apply knowledge to everyday situations |  |
| 92 | 154 |  |  | Chapter 6 Test  • Demonstrate knowledge of concepts taught in Chapter 6 |  |
| Chapter 7: The Moon | | | | | |
| 93 | 156–59 | 135–37 | 105 | • Describe conditions on the moon  • Explain what should be included in the design of a space suit to make it usable and safe  • Defend the importance of designing safe, usable space suits  People as God’s image-bearers  Christians’ use of science to show God’s love to others |  |
| 94–95 | 160–63 | 138–41 | 106 | • Describe the moon’s properties  • Compare and contrast the moon and the earth  • Recognize the effect of gravity on mass and weight  • Explain the moon’s light  God’s Word as the source of truth |  |
| 96–97 | 164–65 | 142–43 | 107 | Activity: Moon Math  • Measure weight and distance  • Calculate moon measurements from earth measurements  • Compare the effects of the moon’s gravity with the  effects of the earth’s gravity | Measuring and using numbers  Making and using models  Inferring  Collecting and recording data |
| 98 | 166–68 | 144–46 | 108 | • Identify the landforms on the moon’s surface  • Define mare, rille, crater, and ray |  |
| 99–100 | 169 | 147 |  | Exploration: Moon Model  • Make a model of the moon’s surface  • Demonstrate an understanding of the terms related to the moon’s surface |  |
| 101–2 | 170–71 | 148–49 | 109 | • Explain the revolution and rotation of the moon  • Define revolution and rotation  God as Master of creation |  |
| 103–4 | 172–73 | 150–51 | 110–12 | • Label the phases of the moon on a diagram  • Differentiate between waxing and waning phases  • Describe the phases of the moon |  |
| 105–6 | 174–75 | 152–53 | 113–14 | Activity: Moonwatchers  • Observe the moon  • Identify the phases of the moon | Observing  Inferring  Recording data  Defining operationally |
| 107–8 | 176–77 | 154–55 | 115–16 | • Identify the relationships of the sun, moon, and earth  • Distinguish between a lunar eclipse and a solar eclipse  • Label a solar eclipse and a lunar eclipse on diagrams |  |
| 109 | 178–81 | 156–59 | 117 | • State that God created the moon  • Describe the two kinds of science  • Describe one theory about how the moon began  • Describe what a Christian believes about the moon’s origin  Bible as the final authority  God’s use of creation for His glory |  |
| 110 | 182 | 160 | 118 | Chapter Review  • Recall concepts and terms from Chapter 7  • Apply knowledge to everyday situations  Creation of moon and opposing theories |  |
| 111 | 182 |  |  | Chapter 7 Test  • Demonstrate knowledge of concepts taught in Chapter 7 |  |
| Chapter 8: Water and Oceans | | | | | |
| 112 | 183 | 161 | 119 | • Describe what a deep-sea fishing boat captain needs to know about the weather, tides, and currents  • Recognize the idea that a boat captain uses his knowledge to help others  Christians’ use of science to show God’s love to others |  |
| 113 | 184–87 | 162–65 | 120 | • Recognize that almost three-fourths of the earth’s surface is covered with water  • Describe the water found on the earth  • Identify gravity as the force that pulls fresh water toward the ocean  • Label and describe the parts of the water cycle  God as Master of creation |  |
| 114 | 188–89 | 166–67 | 121–22 | Activity: The Great Vapor Race  • Discover how the amount of surface area affects the speed at which water evaporates | Measuring  Hypothesizing  Observing  Inferring  Collecting and recording data |
| 115­–16 | 190–93 | 168–71 | 123–26 | • Explain what causes a tide  • Explain what causes a wave  • Identify three things that determine the size of a wave  God as Master of creation  Effect of sin on God’s creation |  |
| 117–18 | 194–97 | 172–75 | 127 | • Identify the two things that control deep ocean currents  • Identify what causes surface currents  • Identify the Gulf Stream as a warm current  • Recognize that surface currents can affect climates |  |
| 119–20 | 198–202 | 176–80 | 128 | • Identify and describe the four main oceans  • Identify the largest ocean and the smallest ocean  • Describe how the ocean floor is similar to the rest of the earth’s surface  • Identify plankton as a main food source for some ocean animals  God’s variety in creation |  |
| 121 | 203–4 |  | 129–30 | Answers in Genesis  • Recognize that God created animals in distinct kinds such as whales and dogs  • Compare the physical characteristics of a dog and a whale  • Describe the features that would have to change for a dog to turn into a whale  • Use the Bible to evaluate the hypothesis that whales evolved from land animals  Truth of the Bible opposing evolution |  |
| 122–23 | 205 | 181 | 131 | Exploration: Marine Mobile  • Research information about an ocean animal and its environment  • Make a mobile to present information about an ocean animal |  |
| 124 | 206–7 | 182–83 | 132–33 | Activity: Mapping the Depths  • Use a graph to map the floor of a model ocean  Christians’ use of science to show God’s love to others | Making and using models  Measuring  Inferring  Collecting and recording data |
| 125 | 208 | 184 | 134 | Chapter Review  • Recall concepts and terms from Chapter 8  • Apply knowledge to everyday situations  Christians’ use of science to show God’s love to others |  |
| 126 | 208 |  |  | Chapter 8 Test  • Demonstrate knowledge of concepts taught in Chapter 8 |  |
| Chapter 9: Weathering and Erosion | | | | | |
| 127 | 210–13 | 185–87 | 135 | • Recognize the interrelationship of science concepts  • Describe the problem erosion causes for road construction  • Explain the job of an erosion-control engineer  • Support the claim that erosion control is a way to help other people  God’s provision for His creation  People as stewards of God’s creation  Christians’ use of science to show God’s love to others |  |
| 128 | 214–18 | 188–92 | 136 | • Identify the changes that result from volcanoes and earthquakes  • Identify natural causes of weathering  • Recognize various landforms  God’s use of creation for His glory  The Flood’s effect on the earth |  |
| 129 | 219–21 | 193–95 | 137–38 | • Identify characteristics of soil  • Describe the three main layers of soil |  |
| 130 | 222–23 | 196–97 | 139–40 | Activity: Investigating Soils  • Compare and contrast two soil samples  • Demonstrate a knowledge of characteristics of soil types | Observing  Measuring  Classifying  Recording and interpreting data  Communicating |
| 131 | 224–28 | 198–202 | 141–42 | • Identify water and wind as causes of erosion  • Identify the effects of water and wind deposition  • Summarize how a delta is formed  The Flood and opposing theories |  |
| 132 | 229–30 |  | 143–44 | Answers in Genesis  • Describe how rock layers can bend without breaking  • Connect the description of the Flood to the layers of rocks on the earth  • Compare the evolutionary explanation for bent rock layers with the biblical explanation based on the Flood  • Predict the outcome of the Bending Rock demonstration  God’s Word as the source of truth |  |
| 133–34 | 231 | 203 |  | Exploration: Controlling Erosion  • Identify and observe local erosion  • Determine the cause of erosion  • Design a plan to prevent or stop erosion |  |
| 135 | 232–33 | 204–5 | 145–46 | Activity: Observing Erosion  • Predict which soil will erode more easily  • Observe the erosion of different soils | Predicting  Measuring  Experimenting  Controlling variables  Observing |
| 136 | 234–37 | 206–9 | 147 | • Identify kinds of erosion caused by gravity  • Identify characteristics of glaciers  • Summarize how the activities of people can cause erosion  God’s provision for His creation  People as stewards of God’s creation |  |
| 137 | 238 | 210 | 148 | Chapter Review  • Recall concepts and terms from Chapter 9  • Apply knowledge to everyday situations |  |
| 138 | 238 |  |  | Chapter 9 Test  • Demonstrate knowledge of concepts taught in Chapter 9 |  |
| Chapter 10: The Earth’s Resources | | | | | |
| 139 | 239 | 211 | 149 | • Describe what knowledge the farmer needs to have to produce the best crops  • Explain what Isaiah 28:24–26 says about farming  • Support the truth that the source of all knowledge is God  God’s Word as the source of truth  People to serve God with work |  |
| 140 | 240–43 | 212–15 | 150 | • Differentiate between renewable and nonrenewable resources  • Recognize that soil is a renewable natural resource  • Identify ways that farmers maintain soil  People as stewards of God’s creation  God’s provision for people  Christians’ use of science to show God’s love to others |  |
| 141 | 244–45 | 216–17 | 151–52 | Activity: Packing a Landfill  • Determine which packing material decomposes best in water  • Decide which packing material would be least harmful for a landfill | Hypothesizing  Observing  Inferring  Defining operationally |
| 142 | 246–49 | 218–21 | 153–54 | • Explain why water is our most important natural resource  • Explain ways we must conserve water  • Identify ways water can become polluted  • Explain what can be done to lessen the effects of harvesting trees  People as stewards of God’s creation  Christians’ use of science to show God’s love to others |  |
| 143 | 250–53 | 222–25 | 155–56 | • Recognize that water energy, wind energy, and solar energy are renewable energy resources  • Name an example of how each type of energy resource is used  • Explain how fossil fuels form  • Describe how fossil fuels can be harmful  God’s provision for people  God’s control of the earth’s resources |  |
| 144–45 | 254 | 226 | 157 | Activity: How Much Trash?  • Record the amount of items discarded in one day  • Sort reusable items from trash  • Determine possible new uses for reusable items | Collecting and recording data  Observing  Classifying  Communicating |
| 146–47 | 255–60 | 227–32 | 158 | • Identify advantages and disadvantages of each energy resource  • Recognize that people have the responsibility to be good stewards  • List ways to reduce, reuse, or recycle resources  People as stewards of God’s creation  People to serve God with work |  |
| 148–49 | 261 | 233 | 159 | Exploration: Sorting Symbols  • Identify differences between the recycling symbols for different kinds of plastic  • Find and sort plastic items according to their recycling symbols |  |
| 150 | 262 | 234 | 160 | Chapter Review  • Recall concepts and terms from Chapter 10  • Apply knowledge to everyday situations  People as stewards of God’s creation |  |
| 151 | 262 |  |  | Chapter 10 Test  • Demonstrate knowledge of concepts taught in Chapter 10 |  |
| Chapter 11: Digestion | | | | | |
| 152 | 264–67 | 235–37 | 161 | • Recognize the interrelationship of science concepts  • Describe how a camp nutritionist uses knowledge and skills to provide healthy menus  • Explain how being a camp nutritionist is one way to love your neighbor  • Create a healthy and tasty menu for a day at camp  Wonder of God’s creativity in human design |  |
| 153 | 268–71 | 238–41 | 162–63 | • Identify the parts of the digestive tract  • Describe the different jobs of saliva, the teeth, and the tongue  • List the four basic tastes  God’s provision for people |  |
| 154–55 | 272–73 | 242–43 | 164–68 | Activity: Designing an Experiment  • Design and conduct an experiment  • Recognize how the senses of smell and taste are related | Experimenting  Predicting  Observing  Inferring  Identifying and controlling variables  Recording data |
| 156–57 | 274­–77 | 244–47 | 169–70 | • Identify the tubes connected to the throat  • Explain how peristalsis moves food  • Describe how the stomach works on food mechanically and chemically  Christians showing a loving spirit |  |
| 158 | 278–81 | 248–51 |  | • Identify the small intestine as the part of the digestive tract where nutrients are absorbed  • Identify the large intestine as the last part of the digestive tract that absorbs water and salts  • Identify three organs that help with digestion but are not part of the digestive tract  • Recognize that insulin is produced by the pancreas  • Describe two jobs of the liver |  |
| 159 | 282–83 | 252–53 | 171–72 | Activity: Starchy Foods  • Use iodine to identify foods that contain starch  • Infer how the darkness of the iodine tells whether a food contains a greater or lesser amount of starch  Christians’ use of science to show God’s love to others | Classifying  Predicting  Experimenting  Observing  Inferring  Recording data |
| 160–61 | 284–88 | 254–58 | 173–75 | • Describe some nutrients needed by the body  • Identify foods that contain those nutrients  • Recognize the food pyramid as a guide for choosing foods to eat  A Christian’s body as God’s temple  God’s provision for people  God’s command of remembrance  Christian fellowship honors God |  |
| 162–63 | 289 | 259 | 176–77 | Exploration: What’s on My Plate?  • Track what is eaten and categorize the foods into the appropriate food groups  • Use MyPlate to make informed food choices |  |
| 164 | 290 | 260 | 178 | Chapter Review  • Recall concepts and terms from Chapter 11  • Apply knowledge to everyday situations |  |
| 165 | 290 |  |  | Chapter 11 Test  • Demonstrate knowledge of concepts taught in Chapter 11 |  |
| Chapter 12: Bones and Muscles | | | | | |
| 166 | 291 | 261 | 179 | • Describe the kind of knowledge a physical therapist should have  • Explain how a physical therapist can use this knowledge to help others  • Explain why the work of a physical therapist is important to Christians  Wonder of God’s creativity in human design |  |
| 167–68 | 292–97 | 262–67 |  | • Identify several bones in the body  • Recognize that the skeleton is the frame that supports the body  • List four purposes for bones  • Recognize that bones consist of several layers  • Name three minerals that are important for healthy bones  People as God’s image-bearers |  |
| 169–70 | 298–300 | 268–70 | 180–81 | • Differentiate between immovable and movable joints  • Identify the movement of each kind of joint  • Identify the location and function of ligaments  • Identify the location and function of cartilage |  |
| 171 | 301 | 271 |  | Activity: X-ray Vision!  • Demonstrate how the bones in the hand and wrist move  • Recognize that joints work together  Christians’ use of science to show God’s love to others | Making and using models  Observing  Inferring |
| 172–73 | 302–3 | 272–73 | 182 | Activity: Moving Muscles  • Make a model  • Observe how bones and muscles work together  Wonder of God’s creativity in human design | Inferring  Making and using models  Observing |
| 174–75 | 304–7 | 274–77 | 183 | • Describe how muscles work  • Explain how muscles attach to bones and other muscles  • Differentiate between voluntary and involuntary muscles  • Identify examples of each type of muscle  Wonder of God’s creativity in human design |  |
| 176 | 308–9 |  | 184–85 | Answers in Genesis  • Define biomimicry  • Compare the structure of the femur to the structure of the Eiffel Tower  • Describe how observing living things can lead to designing  helpful objects  • Praise God for His design in nature |  |
| 177 | 310–12 | 278–80 |  | • Recognize that physical health is related to the kinds of foods eaten  • Identify some vitamins and minerals needed by the body  • Differentiate between a strain and a sprain  God’s provision for people  God’s perfect creation  God as Master of creation |  |
| 178 | 313 | 281 | 186–87 | • List ways that God’s design is evident in His creation  • Describe how all creation reflects God’s design  • Relate key topics in the book to creation  People to serve God with work  Interrelationship of the parts of creation  God’s creativity in, design of, and control over all things |  |
| 179 | 314 | 282 | 188 | Chapter Review  • Recall concepts and terms from Chapter 12  • Apply knowledge to everyday situations |  |
| 180 | 314 |  |  | Chapter 12 Test  • Demonstrate knowledge of concepts taught in Chapter 12 |  |