Lesson Plan Overviews

| Lesson | TEpages | STpages | 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 responsibilitiesGod 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 competitionPeople as God’s special creationGod’s variety in creationGod’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 studentsGod’s provision for His creationImitation of creation by people | CommunicatingUsing modelsInferringClassifying |
| 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 hibernationConsequences of sin on God’s perfect creationThe 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 dataUsing numbersInferringCommunicating |
| 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 visualPeople 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 dirtyPeople as stewards of the earth’s resourcesGod’s creation for mankind’s enjoymentGod’s provision for His creation |  |
| 16 | 32 | 26 | 20 | **Chapter Review**• Recall concepts and terms from Chapter 1• Apply knowledge to everyday situationsPeople 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 contextGod’s variety in creationPeople as God’s image-bearers | Defining operationallyMaking and using modelsCommunicating |
| 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 haveGod’s perfect design |  |
| 29–30 | 50–51 | 44–45 | 33–34 | Activity: What’s for Lunch?• Observe and compare the ants’ responses to different foodsChristians’ use of science to show God’s love to others | ObservingClassifyingCommunicating |
| 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 spidersGod’s design of the smallest creatures |  |
| 34 | 58 | 50 | 40 | **Chapter Review**• Recall concepts and terms from Chapter 2• Apply knowledge to everyday situationsPeople 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 pollinatedGod’s creation for the enjoyment of people God’s provision for His creationPeople 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 seedSeeds 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 seedsGod’s Word as the only true source of guidanceHuman 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 germinatePeople’s responsibility to glorify God | HypothesizingObservingInferringIdentifying and controlling variablesCollecting 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 conifersGod’s perfect design |  |
| 47–48 | 78–79 | 68–69 | 55–56 | Activity: Classifying Leaves• Classify leaves by chosen criteria• Communicate classification criteria to others | ClassifyingObservingCommunicating |
| 49 | 80 | 70 | 57 | **Chapter Review**• Recall concepts and terms from Chapter 3• Apply knowledge to everyday situationsInterrelationship 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 saferChristians’ 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 diagramChristians’ 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 positionsChristians’ use of science to show God’s love to others | PredictingExperimentingIdentifying variablesInferring |
| 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 wedgesPeople as stewards of God’s creationImitation of creation by peoplePeople 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 HypothesizingExperimentingInferring |
| 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 classChristians’ 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 otherPeople 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 circuitChristians’ use of science to show God’s love to othersPeople 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 PredictingExperimentingRecording 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 magnetsPeople 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 queriesExploration: 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 dataExperimentingObservingInferringDefining 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 worksInterrelationship of the parts of creation testifies of God’s designGod-given curiosity of peopleResponsibility 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 lightPeople 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 objectsGod as Master of creationGod’s provision for His creationJesus 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 timeGod 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 | InferringMeasuringExperimentingCollecting 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 bentGod’s provision for His creationGod 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 lensesChristians’ 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 eyeWonder 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 suitsPeople as God’s image-bearersChristians’ 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 lightGod’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 numbersMaking and using modelsInferringCollecting 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 rotationGod 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 | ObservingInferringRecording dataDefining 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 originBible as the final authorityGod’s use of creation for His glory |  |
| 110 | 182 | 160 | 118 | Chapter Review• Recall concepts and terms from Chapter 7• Apply knowledge to everyday situationsCreation 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 othersChristians’ 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 cycleGod 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 | MeasuringHypothesizingObservingInferringCollecting 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 waveGod as Master of creationEffect 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 animalsGod’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 animalsTruth 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 modelsMeasuringInferringCollecting and recording data |
| 125 | 208 | 184 | 134 | Chapter Review• Recall concepts and terms from Chapter 8• Apply knowledge to everyday situationsChristians’ 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 peopleGod’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 landformsGod’s use of creation for His gloryThe 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 | ObservingMeasuringClassifyingRecording and interpreting dataCommunicating |
| 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 formedThe 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 demonstrationGod’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 | PredictingMeasuringExperimentingControlling variablesObserving |
| 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 erosionGod’s provision for His creationPeople 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 GodGod’s Word as the source of truthPeople 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 soilPeople as stewards of God’s creation God’s provision for peopleChristians’ 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 | HypothesizingObservingInferringDefining 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 treesPeople as stewards of God’s creationChristians’ 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 harmfulGod’s provision for peopleGod’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 dataObservingClassifying 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 resourcesPeople as stewards of God’s creationPeople 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 situationsPeople 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 campWonder 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 tastesGod’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 | ExperimentingPredictingObservingInferringIdentifying and controlling variablesRecording 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 chemicallyChristians 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 starchChristians’ use of science to show God’s love to others | Classifying PredictingExperimentingObservingInferringRecording 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 eatA Christian’s body as God’s templeGod’s provision for peopleGod’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 ChristiansWonder 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 bonesPeople 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 togetherChristians’ use of science to show God’s love to others | Making and using modelsObservingInferring |
| 172–73 | 302–3 | 272–73 | 182  | Activity: Moving Muscles• Make a model• Observe how bones and muscles work togetherWonder of God’s creativity in human design | Inferring Making and using modelsObserving |
| 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 muscleWonder 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 sprainGod’s provision for peopleGod’s perfect creationGod 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 creationPeople to serve God with work Interrelationship of the parts of creationGod’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 |  |