Lesson Plan Overview

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| Lesson | Teacher’s Edition | Student Text | Activity Manual | Objectives and Biblical Worldview | Process Skills |
| 1 | 1–3 | 1–3 | 1 | • Define worldview  • List characteristics of a biblical worldview  • Apply a biblical worldview to science |  |
| Chapter 1: What Scientists Do | | | | | |
| 2 | 4–7 | 4–7 | 3–4 | • Recognize that a scientist is someone who studies the world around him  • Know that Christians can use their minds to solve problems and study God’s world  • Recognize that God’s creation points people to Him  • Tell about observing as a science process skill  • Demonstrate observing  God as Creator  People’s use of science to glorify God |  |
| 3–4 | 8–10 | 8–10 | 5–6 | • Identify classifying, measuring, inferring, predicting, and communicating as science process skills  • Demonstrate classifying, measuring, inferring, predicting, and communicating  People’s God-given curiosity |  |
| 5–6 | 11–13 | 11–13 | 7 | • Identify science tools  • Recognize the use for each science tool  People as stewards of God’s creation  God created people to work  People are important |  |
| 7 | 14–17 | 14–17 | 9–10 | • Identify the purpose for experiments  • Describe the steps of an experiment  • Judge whether or not the design of an experiment presents a fair test  • Write about three things scientists use that help them study God’s world  People’s responsibility for their actions  People’s responsibility to glorify God |  |
| 8 | 18–19 | 18–19 | 11–12 | Activity: Keeping Cool  • Demonstrate an understanding of the steps of an experiment  • Measure temperature using a thermometer  • Infer how color can affect temperature  People’s responsibility for their actions  People’s use of science to help others | Measuring  Inferring |
| 9 | 20–21 |  | 13–14 | Chapter Review  • Recall concepts and terms from Chapter 1 |  |
| 10 |  |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 1 |  |

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| Chapter 2: What Living Things Do | | | | | |
| 11 | 22–27 | 20–25 | 15–16 | • Know that God made all things  • Recognize that plants, animals, and people are living things  • Differentiate between living things and nonliving things  • Identify three basic needs of all living things  God’s control of His creation  People as stewards of God’s creation  God’s provision for His creation  God created people to work |  |
| 12 | 28–29 | 26–27 | 17–18 | Activity: Growing Healthy  • Follow a procedure  • Record observations  • Measure plant growth  • Infer that other plants grow in similar ways  God’s design of seeds | Observing  Measuring |
| 13 | 30–33 | 28–31 | 19–20 | • Identify space and shelter as needs of living things  • Describe why you need to learn about the needs of living things  • Recognize that living things grow and change  • Understand that the needs of living things change as they grow  God’s provision for His creation  People are important  People’s use of science to help others |  |
| 14 | 34–37 | 32–35 | 21–22 | • Recognize that living things produce more living things  • Recognize that some living things look like their parents, and others do not  • Describe the life cycle of a bird  God’s design of living things  God’s design of the robin |  |
| 15 | 38–39 | 36–37 | 23, 25, 27, 29–30 | • Identify the stages of a butterfly’s life cycle  • Sequence the stages of a butterfly’s life cycle  • Make a model  • Write about what a life cycle is  God’s design of butterflies |  |
| 16 | 40 |  | 31–32 | Chapter Review  • Recall concepts and terms from Chapter 2 |  |
| 17 | 41 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 2 |  |

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| Chapter 3: How Plants Grow | | | | | |
| 18 | 42–45 | 38–41 | 33–35 | • Recognize that God made plants for our use and His glory  • Recognize that plants need light, air, water, and soil  God’s creation for the use and enjoyment of people  God’s use of creation for His glory |  |
| 19 | 46–47 | 42–43 |  | • Identify the parts of a plant  • Describe the job of each part of a plant  • Make a model to reinforce the parts of a plant and their jobs  God’s design of plants |  |
| 20 | 48–49 | 44–45 | 37–40 | • Know that God created a plant to make the same kind of plant  • Identify the parts of a seed  • Describe what a seed needs to sprout  • Name the three stages of the life cycle of a plant  • Write about the four basic needs of plants  God as Creator  God’s perfect design |  |
| 21 | 50 | 46 |  | Exploration: Plants We Eat  • Make a poster displaying the kinds of plants people eat  • Tell others what was learned |  |
| 22 | 51–53 | 47–49 | 41 | • Recognize that most plants need seeds to grow  • Recognize that some seeds are protected inside a fruit  • Recognize that seeds will produce a plant similar to the adult plant  • Name three ways that seeds are scattered  God’s design of seeds |  |
| 23 | 54–55 | 50–51 | 43–44 | Activity: Traveling Seeds  • Predict and observe how seeds are scattered  • Classify seeds by how they are scattered | Classifying  Communicating |
| 24 | 56 |  | 45–46 | Chapter Review  • Recall concepts and terms from Chapter 3 |  |
| 25 | 57 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 3 |  |

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| Chapter 4: Where Things Live | | | | | |
| 26 | 58–63 | 52–57 | 47–48 | • Differentiate between a community and a population  • Describe what an environment is  • Identify nonliving parts of an environment  • Describe what a habitat is  • Write about the difference between a community and a population  People as stewards of God’s creation  God’s provision for His creation |  |
| 27–28 | 64–69 | 58–63 | 49, 51–52 | • Describe characteristics of desert, rain forest, tundra, and woodland forest habitats  • Identify plants and animals living in each habitat  • Recognize interactions among the living things in each habitat  God’s variety in creation |  |
| 29 | 70–73 | 64–67 | 53–54 | • Describe characteristics of ocean and pond habitats  • Identify plants and animals living in each habitat  • Recognize interactions among the living things in each habitat |  |
| 30–31 | 74–75 | 68–69 | 55, 57 | Activity: Home Sweet Home  • Plan a habitat  • Build a model of a habitat  • Record data from research about a chosen habitat  • Communicate information about a chosen habitat and the things living there | Communicating  Recording data |
| 32 | 76 |  | 59–60 | Chapter Review  • Recall concepts and terms from Chapter 4 |  |
| 33 | 77 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 4 |  |

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| Chapter 5: What Fossils Show Us | | | | | |
| 34 | 78–81 | 70–73 | 61–62 | • Recognize that a person who believes in Creation believes that God made all things  • Recognize that a person who believes in evolution believes that the world was made by chance  • Illustrate that our beliefs affect our observations  • Label statements as beliefs of Creation or evolution  God as Master of Creation  The Fall of all people  God’s provision for redemption |  |
| 35 | 82 | 74 | 63–64 | Exploration: Following Clues  • Infer that fossils provide clues about an animal’s size, speed, and behavior |  |
| 36 | 83–85 | 75–77 | 62, 65–66 | • Explain how fossils form  • Differentiate between evolution and Creation about when fossils formed  • Describe five different ways fossils form  • Differentiate between a cast and a mold |  |
| 37–38 | 86–91 | 78–83 | 67, 69 | • Explain some things fossils can tell us about dinosaurs and some things we cannot know  • Know that the Stegosaurus had two rows of bony plates along its back  • Know that the Tyrannosaurus rex had short front legs and stood on its back legs  • Recall that Noah took every kind of animal, including dinosaurs, on the ark  • Name one possible reason that dinosaurs became extinct  The Flood changed the earth |  |
| 39 | 92–93 | 84–85 | 71–72 | Activity: Bag of Bones  • Infer how scientists guess how to put dinosaur bones together  • Model a dinosaur skeleton | Inferring  Communicating |
| 40 | 94 |  | 73–74 | Chapter Review  • Recall concepts and terms from Chapter 5 |  |
| 41 | 95 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 5 |  |

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| Chapter 6: What Makes Up the Earth | | | | | |
| 42 | 96–101 | 86–91 | 75–76 | • Know that God made the earth with water and then He made the dry land  • Recognize that water covers most of the earth’s surface  • Know that oceans have salt water and rivers have fresh water  • Describe and identify what an ocean, a continent, and an island are  God as Creator  The Flood changed the earth |  |
| 43 | 102–5 | 92–95 | 77 | • Recognize that scientists infer what is inside the earth by what happens on the surface  • Label a diagram of the layers of the earth  • Recognize characteristics of each layer of the earth |  |
| 44 | 106–7 | 96–97 | 79–80 | Activity: The Earth’s Layers  • Model the layers of the earth | Measuring  Inferring |
| 45 | 108–11 | 98–101 | 81–82 | • Differentiate between volcanoes and earthquakes  • Recognize that lava is hot, melted rock that comes from a volcano  • Describe ways that earthquakes and volcanoes change the earth’s surface  • Write about how knowing about the earth’s surface helps us live safely  People’s use of science to help others |  |
| 46 | 112 |  | 83–84 | Chapter Review  • Recall concepts and terms from Chapter 6 |  |
| 47 | 113 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 6 |  |

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| Chapter 7: What Natural Resources Are | | | | | |
| 48 | 114–19 | 102–7 | 85–87 | • Recognize that natural resources are things in nature that God has given us to use  • Recognize that we should conserve the natural resources God has given us  • Identify water, soil, and trees as natural resources  • Describe how we can conserve water, soil, and trees  • Explain how plants can help prevent erosion  People as stewards of God’s creation  God created people to work  Christians’ use of science to show God’s love to others  God’s creation for the use and enjoyment of people |  |
| 49 | 120–21 | 108–9 | 86, 89–90 | • Recognize that fossil fuels are natural resources used for energy  • Identify three kinds of fossil fuels  • Recognize that fossil fuels can cause pollution  • Describe how we can conserve fossil fuels  People as stewards of God’s creation |  |
| 50 | 122–25 | 110–13 | 91–92 | • Identify the three Rs to help conserve our natural resources  • Explain what it means to reuse, reduce, or recycle something  People as stewards of God’s creation |  |
| 51 | 126–27 | 114–15 | 93 | Activity: Recycled Paper  • Recycle newspapers to make paper | Inferring  Measuring |
| 52 | 128 |  | 95–96 | Chapter Review  • Recall concepts and terms from Chapter 7 |  |
| 53 | 129 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 7 |  |

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| Chapter 8: How the Earth Moves | | | | | |
| 54 | 130–33 | 116–19 | 97, 99 | • Recognize that the sun appears to move across the sky from east to west  • Recognize that the earth’s movement causes sunrise and sunset  God as Creator  God’s control of His creation  God’s creation of invisible forces  God’s holding all creation together  God’s orderly design |  |
| 55 | 134–37 | 120–23 | 101–2 | • Describe the earth’s shape as a sphere  • Identify three ways a globe is a model of the earth  • Recognize that the earth rotates on its axis  • Know that the sun shines on one side of the earth at a time  • Explain that the rotation of the earth causes daytime and nighttime  God as Creator  God’s control of His creation  God’s orderly design |  |
| 56 | 138–39 | 124–25 | 103–4 | Activity: Day and Night Across the World  • Demonstrate what causes day and night  • Explain why a place has daytime and nighttime  God’s orderly design | Observing  Inferring |
| 57 | 140–43 | 126–29 | 105–6 | • Know that the earth revolves around the sun  • Recognize that one complete revolution around the sun is equal to a year  • Identify two things that cause the seasons  • Know that God is responsible for the design of the seasons  God’s orderly design |  |
| 58 | 144 |  | 107–8 | Chapter Review  • Recall concepts and terms from Chapter 8 |  |
| 59 | 145 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 8 |  |

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| Chapter 9: How Light Works | | | | | |
| 60 | 146–51 | 130–35 | 109–10 | • Know that God created light  • Identify light as a form of energy  • Identify sources of light  • Know that light travels in a straight line  God as Creator  People as stewards of God’s creation |  |
| 61 | 152–53 | 136–37 | 111 | • Know that light is made of many colors  • Explain that light-colored objects reflect more light  • Explain that dark colors absorb light  God’s love of beauty  The Flood as God’s judgment on sin  God’s faithfulness to keep His promises |  |
| 62 | 154–55 | 138–39 |  | • Differentiate between the words transparent, translucent, and opaque  • Identify objects as transparent, translucent, or opaque |  |
| 63 | 156–57 | 140–41 | 113–14 | Activity: Observing Light  • Classify objects as transparent, translucent, or opaque  • Record observations  • Graph data from observations | Classifying  Observing |
| 64 | 158–60 | 142–44 | 115, 117 | • Recognize that a shadow forms when light is blocked  • Explain that a shadow changes when the light source moves  • Explain that a shadow changes when the object moves |  |
| 65 | 161 | 145 |  | Exploration: Shadow Puppets  • Demonstrate an understanding of how shadows change  • Work together to write a script and make puppets  • Work together to perform a puppet play |  |
| 66 | 162 |  | 119–20 | Chapter Review  • Recall concepts and terms from Chapter 9 |  |
| 67 | 163 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 9 |  |

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| Chapter 10: How Matter Changes | | | | | |
| 68–69 | 164–69 | 146–51 | 121–23, 125–26 | • Identify one reason why we study matter  • Know the three forms of matter  • Differentiate between solids, liquids, and gases  God’s creation for the use of people |  |
| 70 | 170–73 | 152–55 |  | • Describe how matter changes form when it is heated  • Explain what happens when something melts or evaporates  • Recognize water vapor as the gas that forms from water  People as stewards of God’s creation  God’s power over His creation  God’s provision for His creation |  |
| 71 | 174–75 | 156–57 | 127 | • Recognize that cooling matter can cause it to change forms  • Explain condensing and freezing |  |
| 72 | 176–77 | 158–59 | 129–30 | Activity: Changing a Solid  • Observe the rates at which different solids melt | Predicting  Measuring |
| 73 | 178–79 | 160–61 | 131, 133–34 | • Identify a thermometer as a tool used to measure temperature  • Demonstrate that the temperature goes up when something is heated but goes down when something is cooled  • Identify one reason why we study matter  People as God’s image bearers  People’s use of science to help others |  |
| 74 | 180 |  | 135–36 | Chapter Review  • Recall concepts and terms from Chapter 10 |  |
| 75 | 181 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 10 |  |

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| Chapter 11: How Things Move | | | | | |
| 76 | 182–86 | 162–66 | 137–38 | • Identify forces in pictures as a push or a pull  • Know that a stronger force makes an object go faster and farther  • Recognize that a force causes motion  • Know that a force can change the direction of an object’s motion  God’s creation of invisible forces  Christian’ use of science to show God’s love to others |  |
| 77 | 187 | 167 | 139 | Exploration: Forces Walk  • Observe forces in action |  |
| 78–79 | 188–91 | 168–71 | 141, 143–44, 145–46 | • Identify the kind of surfaces that have more or less friction  • Identify the tool used to measure weight  People’s use of science in God’s world  God as Creator |  |
| 80 | 192–93 | 172–73 | 147–48 | Activity: Magnetic Attraction  • Predict whether items will be attracted to a magnet  • Observe items that are attracted to a magnet  People’s use of science in God’s world | Predicting  Classifying |
| 81 | 194–95 | 174–75 | 141, 149 | • Describe the kinds of things that are attracted to a magnet  • Know that the areas on a magnet that have the strongest magnetism are the poles  • Know which poles of magnets attract each other and which ones repel each other  • Explain why we learn about forces  • Write an explanation about what force causes a scooter to roll down a hill  • Write an explanation about what force causes a scooter to stop at the bottom of a hill  God’s creation of invisible forces  Christian’ use of science to show God’s love to others |  |
| 82 | 196 |  | 151–52 | Chapter Review  • Recall concepts and terms from Chapter 11 |  |
| 83 | 197 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 11 |  |

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| Chapter 12: How the Body Works | | | | | |
| 84 | 198–203 | 176–81 | 153, 155, 157 | • Recognize that God made the parts of the body to work together  • Recognize that a system is parts of the body that work together to do a job  • Identify bones as part of the skeletal system  • Identify muscles as part of the muscular system  • Describe how bones and muscles work together to help people move  God’s design for the human body  Christians’ use of their bodies to honor God |  |
| 85 | 204–7 | 182–85 | 155, 159, 160–62 | • Identify the heart and blood vessels as parts of the circulatory system  • Relate the size of the heart to the size of the person’s fist  • Describe how lungs work  • Describe how the circulatory and respiratory systems work together  God’s design for the human body |  |
| 86 | 208–11 | 186–89 | 155, 163, 165, 167–68 | • Identify the path that food travels through the digestive system  • Classify foods into MyPlate food groups  • Know that Christians need to take care of their bodies and try to stay healthy to glorify God  • Write about two things the body needs to stay strong and healthy  Christians’ bodies as God’s temple |  |
| 87–88 | 212–13 | 190–91 |  | Activity: Mapping My Body  • Demonstrate an understanding of where different parts of the body are located  • Make a model to aid learning | Communicating  Inferring |
| 89 | 214 |  | 169–70 | Chapter Review  • Recall concepts and terms from Chapter 12 |  |
| 90 | 215 |  |  | Chapter Test  • Demonstrate knowledge of concepts taught in Chapter 12 |  |