Science 1 - 4th Edition
Lesson Plan Overview

Unit 1: Let's Learn About Science

Chapter 1: Science and Scientists

Lesson	Teacher Edition	Student Edition	Activities	Objectives
1	2–3	1		• Identify and locate the key text features • Infer from key text features the topics of Unit 1
2	4–9	2–7	1–6	**Exploration: Looking at God's World** • Infer from key features the topics for Chapter 1 • Define science • Explain from biblical truth why science is important BWS • Distinguish science activities from activities that are not science
3	10–14	8–12	1–2, 5–8	• Recall the word *science* • Infer the five senses and the body part used with each sense • Define *senses* • Identify the reason God gave people five senses BWS
4	15–18	13–16	1–2, 9–11	• Recall the reason God gave people five senses BWS • Describe what scientists do • Explain from the Bible the importance of what scientists do BWS • Create a list of ways that students can use science to help others • Classify an engineer as having a STEM career
5–6	19–23	17–21	13–18	• Define *worldview* BWS • Identify that every scientist has a worldview BWS • Identify that God is the Creator of all things BWS • Identify that God designed everything to work together BWS • Identify that God made people in His own image to care for the earth BWS • Infer that people learn science to take care of the earth and to help others BWS
7	24	1–21	1–18	**Review** • Recall terms and concepts from Chapter 1
8	25			**Assessment** • Recall and apply terms and concepts from Chapter 1

Chapter 2: What Scientists Do

Lesson	Teacher Edition	Student Edition	Activities	Objectives
9	26–31	22–27	19–22	• Recall what science is and what scientists do • Define *science process skill* • Observe an object using the five senses • Classify objects based on a chosen criteria • Measure an object using a non-standard unit • Classify science process skills as *observe, classify*, and *measure*
10	32–34	28–30	23–26	• Recall that the science process skills of observing, classifying, and measuring are ways people learn about God's world BWS • Define *inference* as a science process skill • Infer the cause from an effect • Predict the outcome of a certain action • Define what a *scientific prediction* is • Identify *communicate* as a science process skill
11	35–40	31–36	19, 27–28	• Identify science tools and their uses • Measure length using non-standard and standard units • Infer reasons for using standard units of measurement • Explain how people learn about God's world BWS • Explain from Genesis 1:28 why accurate measurement is important BWS
12	41	37	29–32	**Exploration: Using Science Tools** • Measure objects using age-appropriate science tools • Record observations • Compare and contrast observations • Infer steps needed to determine accurate measurements
13	42–46	38–42	33–36	• Identify the purpose for an investigation • Identify the steps of the scientific method • Explain the purpose for the problem and hypothesis in a scientific investigation • Create a hypothesis
14	47	43	37–38	**STEM Activity: How to Keep My Pencil on My Desk** • Recall what an engineer does • Identify the steps of the engineering design process • Apply the engineering design process to solve a real life problem • Relate the work of engineering to the commands of Genesis 1:28 BWS
15	48	22–43	19–38	**Review** • Recall terms and concepts from Chapter 2
16	49			**Assessment** • Recall and apply terms and concepts from Chapter 2

Unit 2: Let's Learn About Living Things

Chapter 3: Plants

Lesson	Teacher Edition	Student Edition	Activities	Objectives
17	50–59	44–53	39–42	• Identify the characteristics of living and nonliving things • Classify items as living or nonliving • Identify the needs of plants • Identify ways people use plants • Explain from Genesis 3:17–18 how the Fall affected plants BWS
18	60–65	54–59	43–48	• Identify each part of a plant and its function • Relate plant survival and growth to God's creational design BWS
19	66	60	49–50	**Investigation: Plant Needs** • Predict the effects on the growth and survival of a plant when its needs are not met • Observe and describe parts of a plant • Draw a conclusion about plant needs (about the growth and survival of plants) based on observations • Draw a conclusion from the investigation about God's creational design of plants BWS
20	67–69	61–63	51	• Define *life cycle* • Identify and describe the stages of the life cycle of a plant • Sequence stages of a plant's life cycle
21	70	64	39, 53–56	• Compare and contrast a seedling with an adult plant • Explain that young plants are like the parent plants because God made plants to reproduce after their kind (Genesis 1:11) BWS • Compare and contrast the same kind of plant to show that they are recognized as similar but can also vary
22	71	65	40, 57–58	**STEM Activity: Unwanted Plants** • Design a solution to prevent unwanted plants • Draw and label the design • Explain how the design solves the problem • Relate the growth of weeds and other unwanted plants to Genesis 3:17–18 and how the Fall affected plants BWS
23	72	44–65	39–58	**Review** • Recall terms and concepts from Chapter 3

Chapter 4: Animals

Lesson	Teacher Edition	Student Edition	Activities	Objectives
25	74–79	66–71	59–61	• Infer from key text features the topic for Chapter 4 • Distinguish the identity of living and nonliving things in an environment • Identify the needs of animals • Explain that God designed animals and their environments to work together so they can survive and grow BWS
26	80–83	72–75	63–66	• Identify external characteristics of mammals, birds, and fish • Classify animals as mammals, birds, and fish based on similar external characteristics • Classify a zoologist as a scientist
27	84–87	76–79	67–68	• Relate the function of animal body parts to the survival and growth of animals
28	88–93	80–85	69–70	• Identify and sequence the stages of the life cycle of an animal • Name ways that animals care for their offspring • Compare and contrast animals of the same kind • Compare and contrast animals and their offspring • Identify the Bible's explanation for animal death BWS
29	94–95	86–87	71–72	**STEM Activity: Copying God's Design** • Identify a real-life human problem • Design a solution to a human problem by using biomimicry • Draw and label the design • Explain how the design solves the problem
30	96	66–87	59–72	**Review** • Recall terms and concepts from Chapter 4
31	97			**Assessment** • Recall and apply terms and concepts from Chapter 4

Unit 3: Let's Learn About Our Bodies

Chapter 5: The Human Body

Lesson	Teacher Edition	Student Edition	Activities	Objectives
32	98–104	88–94	73–75	• Infer the topic of the unit and the chapter based on the pictures and headings • Compare and contrast the needs of animals to the needs of people • Explain how God created the first man and woman BWS • Evaluate the statement that people are no different from animals BWS
33	105	95	77–78	**Exploration: My Head** • Observe the human head • Identify body parts found on the head • Identify purposes for why God designed the body parts located on the head BWS • Associate each of four senses with the correct body part • Apply knowledge of a human body part to give praise to God BWS
34	106–10	96–100	74, 79–80	• Recall and describe the body parts of the head • Describe the head, arm, and leg • Label the head, arm, and leg • Explain ways that God's design of the human outside body parts helps people survive and grow (Psalm 139:14) BWS
35	111–16	101–6	73–74, 81–82	• Describe the function of the brain, lungs, heart, stomach, bones, and muscles • Label the brain, lungs, heart, stomach, bones, and muscles on a diagram • Explain ways that God's design of the human body parts helps people survive and grow BWS
36	117	107	83–89	**Exploration: How My Lungs Work** • Assemble internal body parts to show location • Construct a model that shows how the lungs work • Explain ways that God's design of the lungs helps people survive and grow BWS
37	118	88–107	73–89	**Review** • Recall terms and concepts from Chapter 5
38	119			**Assessment** • Recall and apply terms and concepts from Chapter 5

Chapter 6: Care for the Human Body

Lesson	Teacher Edition	Student Edition	Activities	Objectives
39	120–24	108–12	91–94	• Identify kind and respectful behavior • Explain why we should treat other people with kindness and respect BWS • Formulate a plan to show how to treat another person with love, care, and respect BWS • Identify healthy habits for a strong body
40	125–28	113–16	95–100	• Identify ways to prevent the spread of germs • Identify healthy habits for strong teeth • Explain the importance of developing healthy habits • Practice healthy habits
41	129	117	101–2	**Investigation: Clean Hands** • Formulate a hypothesis to determine the effect that washing hands has on germs • Record observations • Draw conclusions from data collected
42	130–31	118–19	103	• Identify safe habits when at play and in the car • Explain the importance of safe habits
43	132–34	120–22	104–6	• Identify safe habits at home and in the community • Identify fire hazards • Explain the proper response in an emergency • Identify trustworthy adults to go to in a dangerous situation
44	135	123	107–8	**STEM Activity: Safe Shoes** • Propose a possible solution to the real-life problem of slick-soled shoes • Construct a design to solve the problem • Communicate to others how the design solves the problem
45	136	108–23	91–108	**Review** • Recall terms and concepts from Chapter 6
46	137			**Assessment** • Recall and apply terms and concepts from Chapter 6

Unit 4: Let's Learn About Earth and Space

Chapter 7: The Earth and Its Lights

Lesson	Teacher Edition	Student Edition	Activities	Objectives
47	138–44	124–30	109, 111	• Infer topics by previewing the unit and chapter • Explain from Genesis 1 how the earth, sun, moon, and stars were formed BWS • Evaluate from the Bible an opposing view of how the earth, sun, moon, and stars formed BWS
48	145–49	131–35	113–14	• Describe the earth's daily motion • Identify the sun as a star • Identify the beneficial properties of the sun • Explain from Genesis 1 why God made the sun BWS • Describe and predict the sun's pattern across the sky
49	150	136	115–16	**Investigation: Stars in the Day** • Formulate a hypothesis for why it is hard to see stars during the daytime • Observe simulated stars in various lighting • Infer why it is hard to see stars, other than our sun, during the daytime
50	151–53	137–39	117	• Identify the characteristics of stars other than the sun • Identify the telescope as a magnifying tool to observe stars other than the sun • Identify the groups of stars called the Big Dipper and the Little Dipper • Identify the North Star
51–52	154–58	140–44	109, 119–22	• Identify the characteristics of the moon • Identify what an astronaut does • Identify the changes in the shape of the moon over the course of a month • Predict the phases of the moon over the course of a month • Explain from Genesis 1 why God made the moon BWS • Explain how the sky changes each day
53	159	145	123–27	**Exploration: Changes in the Sky** • Compare and contrast the nighttime sky with the daytime sky • Predict the moon's phase • Infer the cause for the changes in the sky each day • Apply our knowledge of the earth, sun, moon, and stars to praising God for His greatness and goodness BWS
54	160	124–45	109–27	**Review** • Recall terms and concepts from Chapter 7
55	161			**Assessment** • Recall and apply terms and concepts from Chapter 7

Chapter 8: Seasons

Lesson	Teacher Edition	Student Edition	Activities	Objectives
56	162–67	146–51	131–34	• Recall that the earth rotates once each day • Identify that the earth revolves around the sun • Identify that one complete revolution around the sun is equal to one year • Identify the two things that cause the seasons • Sequence the cycle of the seasons
57	168	152	135–36	**Exploration: Using a Thermometer** • Recall two things that cause the seasons • Recall the thermometer as a scientific tool used to measure temperature • Relate the movement of the red line on the thermometer to changes in temperature • Measure temperature to record information • Record temperature using a thermometer
58	169–70		137–40	• Recall the cycle of the seasons by singing a song • Compare and contrast temperature and amount of daylight among the seasons • Infer the temperature and length of daylight hours for each season
59	171–75	153–57	129, 141–42	• Recall the cycle of seasons by singing a song • Explain, using Scripture, that seasonal patterns exist by God's design BWS • Identify characteristics of winter and spring
60	176–80	158–62	129, 141–44	• Recall the cycle of seasons by singing a song • Explain what a landscape architect does • Identify characteristics of summer and fall • Defend, using Scripture, that seasonal patterns exist by God's design BWS
61	181	163	145–51	**Exploration: Seasons Where I Live** • Compare and contrast the characteristics of seasons with the seasons in your area • Communicate by constructing a booklet that represents the seasons in your area
62	182	146–63	129–51	**Review** • Recall terms and concepts from Chapter 8
63	183			**Assessment** • Recall and apply terms and concepts from Chapter 8

Chapter 9: Weather

Lesson	Teacher Edition	Student Edition	Activities	Objectives
64	184–91	164–71	154–58	• Define *weather* • Recall what temperature is • Recall the scientific tool that measures temperature • Define *wind* • Identify the appearance of a flag when the wind is calm, light, and strong
65	192–95	172–75	153, 159–60	• Define *water cycle* • Sequence the movement of water in the water cycle • Identify the appearance of the sky on clear, partly cloudy, and cloudy days • Identify types of precipitation • Explain how the weather changes from day to day
66	196–97	176–77	154, 161–65	• Define *meteorologist* • Explain what a meteorologist does • Contrast the trustworthiness of Bible promises with the trustworthiness of scientific predictions BWS • Evaluate the statement that science gives us the most trustworthy information about our world BWS • Practice using tools of a meteorologist
67–68	198–99	178–79	153, 167–73	**Exploration: Weather Watching** • Recall what a weather prediction is • Infer from Proverbs 22:3 that weather predictions help us to prepare for the future BWS • Observe, collect, record, and report weather data using tools of a meteorologist • Identify weather patterns in data collected to predict the weather • Compare and contrast weather predictions with actual observations
69	200	164–79	153–73	**Review** • Recall terms and concepts from Chapter 9
70	201			**Assessment** • Recall and apply terms and concepts from Chapter 9

Unit 5: Let's Learn About Energy

Chapter 10: Light

Lesson	Teacher Edition	Student Edition	Activities	Objectives
71	202–10	180–88	175–78	• Identify what energy is • Identify light as energy • Defend, using Scripture, the statement that God created light BWS • Describe sources of light as natural or manmade • Identify cause-and-effect energy relationships
72	211	189	179–81	**Investigation: Observing Light** • Predict the amount of light that travels through different objects • Record observations • Graph data from observations • Draw conclusions from the data
73	212–17	190–95	183–85	• Differentiate between objects that are transparent, translucent, and opaque • Recognize that a shadow forms when light is blocked • Explain that a shadow changes when a light source moves
74	218	196	187–89	**Investigation: Illuminate Objects** • Predict whether objects can be seen if light is available to illuminate them or if they give off their own light • Observe objects in a pinhole box • Infer that objects can be seen if light is available to illuminate them or if they give off their own light
75	219–21	197–99	191–92	• Recall that objects can be seen if light is available to illuminate them or if they give off their own light • Identify that light travels in a straight line • Infer that mirrors reflect light
76	222	180–99	175–92	**Review** • Recall terms and concepts from Chapter 10
77	223			**Assessment** • Recall and apply terms and concepts from Chapter 10

Chapter 11: Sound

Lesson	Teacher Edition	Student Edition	Activities	Objectives
78	224–27	200–203	195–96	• Recall hearing as one of the five senses • Identify sound as a form of energy • Identify sound as a vibration that can be heard • Infer different ways sound can be made
79	228–31	204–7	193, 197–98	• Identify that sound travels in waves • Observe that sound travels in all directions • Observe that sound travels through matter • Relate sound and the human ear to God's creational design BWS • Relate sound to the vibration of materials
80	232–35	208–11	199–200	• Identify the characteristics of volume • List examples of loud and soft sound • Identify the characteristics of pitch • List examples of sound with high and low pitch • Explain two ways that sound changes
81	236	212	201–3	**Investigation: Hearing Pitch** • Formulate a hypothesis for how the thickness of a rubber band will affect pitch • Measure with numbers the length of a stretched rubber band • Observe that the pitch of a sound is affected by the thickness of a rubber band when the rubber band is plucked • Infer that the thickness of a rubber band influences the pitch of the sound the rubber band produces • Explain how the pitch of a stringed instrument can be changed
82	237	213	205–6	**STEM Activity: Making Music** • Design a musical instrument with four strings of varying pitch • Draw and label the design of the stringed musical instrument • Make a model of the stringed musical instrument • Test and improve the stringed instrument model • Explain how the design of the musical instrument solved the problem of having four strings of varying pitch
83	238	200–213	193–206	**Review** • Recall terms and concepts from Chapter 11
84	239			**Assessment** • Recall and apply terms and concepts from Chapter 11

Chapter 12: Communicating with Light and Sound

Lesson	Teacher Edition	Student Edition	Activities	Objectives
85	240–47	214–21	208–13	• Identify ways light and sound are used to communicate at home and school • Explain how various sources of light and sound communication at home and school can be used to help people BWS • Explain how to determine whether light and sound communication is good or bad BWS • Evaluate uses of light and sound communication BWS
86	248–51	222–25	208–10, 213–16	• Identify ways light and sound are used in the community to communicate • Explain how various sources of light and sound communication in the community can be used to help other people BWS • Explain how to determine whether light or sound communication is good or bad BWS • Evaluate uses of light and sound communication BWS
87	252	226	217–20	**STEM Activity: Helping with Light or Sound** • Propose possible solutions to a real-life problem using light or sound • Draw a design that uses light or sound to solve a real-life problem • Communicate to others how the design solves the problem
88–89	253–60	227–34	13, 207–10, 221–22	• Recall what a worldview is • Summarize from the Bible where the world came from BWS • Construct a response explaining why things work the way they do in our world BWS • Determine who we are and why we are here BWS • Compare and contrast the importance of science with the importance of the Bible BWS
90	261	235	208–9, 223–24	**Exploration: A Song of Praise** • Create a song of praise for God's creation BWS • Formulate a sentence explaining how the song of praise will be used BWS • Explain how to determine whether the words of the song of praise are good or bad BWS