

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		<ul style="list-style-type: none"> Identify and locate the key text features Infer from key text features the topics of Unit 1
2	4–9	2–7	1–6	<p>Exploration: Looking at God's World</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Recall the word <i>science</i> Infer the five senses and the body part used with each sense Define <i>senses</i> Identify the reason God gave people five senses BWS
4	15–18	13–16	1–2, 9–11	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Define <i>worldview</i> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 1
8	25			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Recall what science is and what scientists do Define <i>science process skill</i> 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 <i>observe, classify, and measure</i>
10	32–34	28–30	23–26	<ul style="list-style-type: none"> Recall that the science process skills of observing, classifying, and measuring are ways people learn about God’s world BWS Define <i>inference</i> as a science process skill Infer the cause from an effect Predict the outcome of a certain action Define what a <i>scientific prediction</i> is Identify <i>communicate</i> as a science process skill
11	35–40	31–36	19, 27–28	<ul style="list-style-type: none"> 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	<p>Exploration: Using Science Tools</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>STEM Activity: How to Keep My Pencil on My Desk</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 2
16	49			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Investigation: Plant Needs</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Define <i>life cycle</i> 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	<ul style="list-style-type: none"> 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	<p>STEM Activity: Unwanted Plants</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 3

Chapter 4: Animals

Lesson	Teacher Edition	Student Edition	Activities	Objectives
25	74–79	66–71	59–61	<ul style="list-style-type: none"> • 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 
26	80–83	72–75	63–66	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Relate the function of animal body parts to the survival and growth of animals
28	88–93	80–85	69–70	<ul style="list-style-type: none"> • 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 
29	94–95	86–87	71–72	<p>STEM Activity: Copying God’s Design</p> <ul style="list-style-type: none"> • 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	<p>Review</p> <ul style="list-style-type: none"> • Recall terms and concepts from Chapter 4
31	97			<p>Assessment</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> 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	<p>Exploration: My Head</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Exploration: How My Lungs Work</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 5
38	119			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Investigation: Clean Hands</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Identify safe habits when at play and in the car Explain the importance of safe habits
43	132–34	120–22	104–6	<ul style="list-style-type: none"> 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	<p>STEM Activity: Safe Shoes</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 6
46	137			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Investigation: Stars in the Day</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Exploration: Changes in the Sky</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 7
55	161			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Exploration: Using a Thermometer</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Exploration: Seasons Where I Live</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 8
63	183			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Define <i>weather</i> Recall what temperature is Recall the scientific tool that measures temperature Define <i>wind</i> Identify the appearance of a flag when the wind is calm, light, and strong
65	192–95	172–75	153, 159–60	<ul style="list-style-type: none"> Define <i>water cycle</i> 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	<ul style="list-style-type: none"> Define <i>meteorologist</i> 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	<p>Exploration: Weather Watching</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 9
70	201			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> • 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	<p>Investigation: Observing Light</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<p>Investigation: Illuminate Objects</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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	<p>Review</p> <ul style="list-style-type: none"> • Recall terms and concepts from Chapter 10
77	223			<p>Assessment</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Investigation: Hearing Pitch</p> <ul style="list-style-type: none"> 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	<p>STEM Activity: Making Music</p> <ul style="list-style-type: none"> 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	<p>Review</p> <ul style="list-style-type: none"> Recall terms and concepts from Chapter 11
84	239			<p>Assessment</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>STEM Activity: Helping with Light or Sound</p> <ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<p>Exploration: A Song of Praise</p> <ul style="list-style-type: none"> 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