# Science 1 - 4th Edition
## Lesson Plan Overview

### Unit 1: Let’s Learn About Science

#### Chapter 1: Science and Scientists

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| 1      | 2–3             | 1               | 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 text features the topics for Chapter 1  
                      • Define science  
                      • Explain from biblical truth why science is important  
                      • 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 |
| 4      | 15–18           | 13–16           | 1–2, 9–11  | • Recall the reason God gave people five senses  
                      • Describe what scientists do  
                      • Explain from the Bible the importance of what scientists do  
                      • 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*  
                      • Identify that every scientist has a worldview  
                      • Identify that God is the Creator of all things  
                      • Identify that God designed everything to work together  
                      • Identify that God made people in His own image to care for the earth  
                      • Infer that people learn science to take care of the earth and to help others |
| 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

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| 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  
• 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  
• Explain from Genesis 1:28 why accurate measurement is important |
| 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 |
| 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

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| 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 |
| 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 |
| 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 |
| 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)  
• 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 |
| 23     | 72              | 44–65           | 39–58      | **Review**  
• Recall terms and concepts from Chapter 3 |
## Chapter 4: Animals

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| 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. |
| 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. |
| 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

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| 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  
• Evaluate the statement that people are no different from animals |
| 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  
• Associate each of four senses with the correct body part  
• Apply knowledge of a human body part to give praise to God |
| 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) |
| 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 |
| 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 |
| 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

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| 39     | 120–24          | 108–12         | 91–94      | • Identify kind and respectful behavior  
• Explain why we should treat other people with kindness and respect
• Formulate a plan to show how to treat another person with love, care, and respect
• 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 |
• 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

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| 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  
  • Evaluate from the Bible an opposing view of how the earth, sun, moon, and stars formed |
| 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  
  • 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  
  • 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 |
| 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

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| 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         | 153–57         | 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  
- 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 |
| 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

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| 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  
• Evaluate the statement that science gives us the most trustworthy information about our world  
• Practice using tools of a meteorologist |
• Recall what a weather prediction is  
• Infer from Proverbs 22:3 that weather predictions help us to prepare for the future  
• 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

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| 71     | 202–10          | 180–88          | 175–78     | • Identify what energy is  
• Identify light as energy  
• Defend, using Scripture, the statement that God created light  
• Describe sources of light as natural or manmade  
• Identify cause-and-effect energy relationships |
|        |                 |                 |            | **Investigation: Observing Light**  
• Predict the amount of light that travels through different objects  
• Record observations  
• Graph data from observations  
• Draw conclusions from the data |
| 72     | 211             | 189             | 179–81     | |
|        |                 |                 |            | **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 |
| 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     | |
| 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

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| 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  
         |                |                |            | • 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

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| 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  
        |                  |                 |            | • Explain how to determine whether light and sound communication is good or bad  
        |                  |                 |            | • Evaluate uses of light and sound communication |
| 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  
        |                  |                 |            | • Explain how to determine whether light or sound communication is good or bad  
        |                  |                 |            | • Evaluate uses of light and sound communication |
| 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  
        |                  |                 |            | • Construct a response explaining why things work the way they do in our world  
        |                  |                 |            | • Determine who we are and why we are here  
        |                  |                 |            | • Compare and contrast the importance of science with the importance of the Bible |
| 90     | 261             | 235             | 208–9, 223–24 | Exploration: A Song of Praise  
        |                  |                 |            | • Create a song of praise for God’s creation  
        |                  |                 |            | • Formulate a sentence explaining how the song of praise will be used  
        |                  |                 |            | • Explain how to determine whether the words of the song of praise are good or bad |