

Curriculum Guide for 3rd Grade Science

Unit 1: Let’s Connect with Earth and Space Science

7 weeks

Biblical Worldview Essential Questions

What patterns of movement are in the solar system?

How does learning about the weather help us to serve others?

What do rocks, minerals and fossils tell us about the earth’s history?

Objectives	Methods	Resources	Assessment
<p>The students will</p> <ul style="list-style-type: none"> • Compare and contrast different worldviews on the origins of the solar system. • Identify the force that keeps that keeps the planets in their revolution around the sun. • Explain that God designed patterns of movement in the solar system. • Identify the earth’s main source of energy. • Build a model of the solar system. • Identify characteristics of the inner planets. • Explain why the earth’s design is unique, using Isaiah 45:18. • Sequence and describe the phases of the moon. • Differentiate between the waxing and waning of the moon’s phases. • Identify characteristics of outer planets. • Sequence planets in order from the sun outward. • Compare and contrast planets and dwarf planets. • Explain how the atmosphere and sun affect our weather. • Predict what future weather might be, using given weather patterns. • Create models of four types of clouds. • Explain how the water cycle works. • Describe four forms of precipitation. • Identify six types of severe weather. • Explain why weather predictions are important. • Give examples of how weather predictions can keep us safe. • Identify the three main climate zones. 	<ul style="list-style-type: none"> • Lecture • Guided class discussion • Group reading • Completing BLM worksheets individually, in groups, and within classroom discussion. • Science labs. 	<ul style="list-style-type: none"> • Teacher and student text (Purposeful Design, Science Level 3) • Level 3 • Resources allocated for Science labs. 	<ul style="list-style-type: none"> • Teacher and student text (Purposeful Design, Science Level 3) • Response to classroom questions. • Chapter quizzes. • Chapter tests.

<ul style="list-style-type: none">• Identify the characteristics of each climate zone.• List examples of geographic locations in each climate zone.• Identify climate change.• Compare and contrast different views of climate change.• Defend the claim that climate change has limits using Genesis 8:22.• Identify four components of soil.• Identify the three main layers of soil.• Examine topsoil to identify its various components.• Identify the three main types of rocks.• Explain how rocks and minerals are related.• Identify some properties of minerals.• Differentiate between common and precious minerals.• Recall what a fossil is.• Compare and contrast different views of how and when most fossils formed.• Explain why there are marine fossils on mountains.• Compare and contrast views on adaptation.• Create a model bone fossil to observe the fossilization by the process of mineral replacement.			
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Unit 2: Let's Connect with Life Science

8 weeks

Biblical Worldview Essential Questions

Why is it important to study parts of the body?

Why is it important for plants to reproduce?

What are the main characteristics of cold-blooded animals?

What are the characteristics of warm-blooded animals?

How do organism work together?

Objectives	Methods	Resources	Assessment
<ul style="list-style-type: none"> • Explain using the Bible's teaching, that God knows all about the people He created. • Identify the smallest living part of an organism. • Label the five main components of a microscope. • Identify main parts of an animal cell and a plant cell. • Make a model of an animal cell. • Explain how cells, tissues, organs, and systems are related to each other. • Identify four organs of the human body. • Classify fingerprint patterns. • Identify the parts of the dermis. • Identify 3 conditions a seed needs to germinate. • Sequence the life cycle of a flowering plant. • Name three things plants need for photosynthesis. • Sequence the steps of photosynthesis. • Explain, using biblical teaching, why photosynthesis occurs. • Compare and contrast different views about plant adaptation. • Plan and design a way to water a plant using the engineering design process. • Create a model to water a plant. • Differentiate between invertebrates and vertebrates. • Differentiate between warm blooded and cold-blooded animals. • Identify the characteristics of fish and amphibians. • Identify the characteristics, structures and features of reptiles. • Identify the characteristics of insects and spiders. • Identify the characteristics of birds. 	<ul style="list-style-type: none"> • Lecture • Guided class discussion • Group reading • Completing BLM worksheets individually, in groups, and within classroom discussion. • Science labs. 	<ul style="list-style-type: none"> • Teacher and student text (Purposeful Design, Science Level 3) • Level 3 Resources allocated for science labs. 	<ul style="list-style-type: none"> • Teacher and student text (Purposeful Design, Science Level 3) • Response to classroom questions. • Chapter quizzes. • Chapter tests.

<ul style="list-style-type: none">• Sequence the stages of a bird's life cycle.• Compare humans and mammals.• Identify similar and different patterns of inherited traits shared between offspring and their parents among siblings.• Identify animal instincts.• Identify four characteristics of organisms.• Identify what makes up an ecosystem.• Classify organisms as producers, consumers, or decomposers.• Sequence on a food chain the transfer of energy from one organism to another.• Identify what a food web is.• Identify how an ecosystem maintains balance.			
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Unit 3: Lets connect with Physical Science

6 weeks

Biblical Worldview Essential Questions

What changes to matter do I observe around me?

How are force and motion connected?

How are electricity and magnetism a part of your everyday life?

Objectives	Methods	Resources	Assessment
<ul style="list-style-type: none"> • Identify physical properties of matter. • Explain the difference between mass and volume. • Identify an atom. • Compare and contrast properties of solids, liquids, and gases. • Identify what physical and chemical changes are. • Identify causes of sound vibrations. • Formulate a biblical explanation for how we know that God created force. • Identify balanced and unbalanced forces. • Identify patterns of motions that God made at creation. • Identify what work is. • Identify the living things or nonliving things that can do work. • Identify what electricity is. • Identify when an object is positively or negatively charged or when the object is neutral. • Differentiate between static electricity and current electricity. • Differentiate between a closed simple electric circuit and an open simple electric circuit. • Predict whether objects are conductors or insulators. • Recall what a magnet is. • Analyze the magnetic forces or attract and repel. • Identify what an electromagnet is. • Differentiate between a bar magnet and electromagnet. • Design a magnetic or electromagnetic tool. 	<ul style="list-style-type: none"> • Lecture • Guided class discussion • Group reading • Completing BLM worksheets individually, in groups, and within classroom discussion. • Science labs. 	<ul style="list-style-type: none"> • Teacher and student text (Purposeful Design, Science Level 3) • Level 3 Resources allocated for science labs. 	<ul style="list-style-type: none"> • Teacher and student text (Purposeful Design, Science Level 3) • Response to classroom questions. • Chapter quizzes. Chapter tests.