

Curriculum Guide Second Grade Science

Unit 1: Let's Explore Matter and Motion

S2.2, S2.3, S2.4, S2.5, S2.7

Biblical Worldview Essential Questions

**What can we learn about God from learning about creation?
Based on Genesis 1:28, why is accurate measurement important?**

6 weeks

Objectives	Methods	Resources	Assessment
<p>The students will...</p> <p>Chapter 1: What Science Is</p> <ul style="list-style-type: none"> ● Explain how people use their senses and other tools to learn about God's world ● Apply science inquiry skills and age-appropriate tools to gather information and reach conclusions ● Explain why science is important from a Biblical worldview ● Apply the basic steps of the scientific method ● Apply the engineering design process to solve a real-life problem <p>Chapter 2: What Matter Is</p> <ul style="list-style-type: none"> ● Identify characteristics of matter ● Explain the origin of matter using the Bible ● Differentiate the properties and states of matter ● Apply the science inquiry skills of observe, classify, and predict <p>Chapter 3: How Matter Changes</p> <ul style="list-style-type: none"> ● Develop a Biblical explanation for the origin, order, and 	<ul style="list-style-type: none"> ● class readings ● lecture ● discussion of Biblical concepts ● Activity worksheets ● Educational videos ● Investigations and experiments ● observation during class demonstrations 	<ul style="list-style-type: none"> ● <i>BJU Press Science 2, Fifth Edition</i> ● <i>BJU Press Science 2</i> ● <i>Activities</i> ● BJU online teacher resources ● Holy Bible ● Instructional Aids and Visuals <p>Chapter 1</p> <ul style="list-style-type: none"> ● Pictures of gears working together ● ruler or picture ● hand lens or picture ● beaker or picture ● thermometer or picture ● balance or picture ● white and black paper ● tape ● thermometers <p>Chapter 2</p> <ul style="list-style-type: none"> ● different shapes/sizes of jars or containers ● water ● balance ● small objects with different properties of matter ● baking sheet ● tape ● 2 different liquids ● towel <p>Chapter 3</p> <ul style="list-style-type: none"> ● Celsius thermometer ● Ice cube ● Small plate ● timer 	<ul style="list-style-type: none"> ● observation of class participation ● class assignments ● tests ● oral responses ● experiments

<p>benefits of God's design of matter</p> <ul style="list-style-type: none"> ● Relate changes in temperature to changes in the states and properties of matter ● Apply the steps of the scientific method to observe and differentiate changes of matter ● Apply science inquiry skills of observe, predict, measure, record, and infer ● Identify ways matter can be physically changed or combined ● Apply the steps of the engineering design process to solve a real-life problem <p>Chapter 4: How Matter Moves</p> <ul style="list-style-type: none"> ● Describe matter in terms of force, motion, direction, and speed ● Develop a scriptural response to God's design and order of how matter moves ● Apply the steps of the scientific method to observe and infer the characteristics of force ● Apply the steps of the engineering design process to solve a real life problem ● Analyze three kinds of force 		<ul style="list-style-type: none"> ● ice chips ● frozen chocolate chips ● frozen butter pieces ● 3 reusable plastic bags ● stop watch ● cup ● picture of sliced apples ● paper clip ● pencil ● building blocks <p>Chapter 4</p> <ul style="list-style-type: none"> ● rolling chair ● ball ● carpet or rug ● towel or blanket ● Ping-Pong ball ● softball ● golf ball ● piece of paper ● horseshoe magnet ● plastic button ● eraser ● nail ● metal paper clip ● penny ● staples ● 3 other objects (magnetic or not) ● magnets - horseshoe, bar, and disc 	
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Science -Unit 2: Let's Explore Earth and Space

S2.1, S2.2, S2.3, S2.6, S2.7

Biblical Worldview Essential Questions

According to Genesis 1, who created the solar system?

According to Genesis 1:27–28 and Matthew 22:37–39, why is slowing or preventing erosion important?

Why should people conserve natural resources?

4 weeks

Objectives	Methods	Resources	Assessment
<p>The students will...</p> <p>Chapter 5: How the Earth Moves</p> <ul style="list-style-type: none"> ● Explain from the Bible that God created the solar system ● Identify parts of the solar system ● Differentiate the earth's rotation from its revolution ● Apply science inquiry skills of observe and infer <p>Chapter 6: What Makes Up the Earth</p> <ul style="list-style-type: none"> ● Explain using Scripture, the origin of the earth, with its water and dry land ● Identify characteristics of the water and land that cover the earth's surface ● Apply science inquiry skills of classify, communicate, measure, and infer ● Explain what scientists can infer about the layers of the earth and why they can only infer this ● Explain the differences among weathering, erosion, volcanoes, and earthquakes 	<ul style="list-style-type: none"> ● class readings ● lecture ● discussion of Biblical concepts ● Activity worksheets ● Educational videos ● Investigations and experiments ● observation during class demonstrations ● planet project 	<ul style="list-style-type: none"> ● <i>BJU Press Science 2, Fifth Edition</i> ● <i>BJU Press Science 2 Activities</i> ● BJU online teacher resources ● Holy Bible ● Instructional Aids and Visuals <p>Chapter 5</p> <ul style="list-style-type: none"> ● globe ● flashlight ● ball ● dot stickers (red, blue, green, and yellow) ● solar system - planet project - planets, glue, and crayons or colored pencils <p>Chapter 6</p> <ul style="list-style-type: none"> ● Globe ● World map ● Drawing paper ● Crayons/colored pencils ● Modeling clay - red, green, and yellow ● thread 	<ul style="list-style-type: none"> ● observation of class participation ● class assignments ● tests ● oral responses ● experiments ● project

<ul style="list-style-type: none"> ● Formulate a statement to explain why learning about the earth can help us live safely ● Evaluate, using Scripture, the statement that all weather and erosion occur slowly ● Apply the steps of the engineering design process to solve a real-life problem <p>Chapter 7: What Natural Resources Are</p> <ul style="list-style-type: none"> ● Describe natural resources ● Explain conservation of natural resources and the products made from them ● Formulate a statement that uses Scripture to explain how conservation of natural resources obeys God's commands ● Formulate a statement of explain why learning about recycling can help people conserve natural resources 		<p>Chapter 7</p> <ul style="list-style-type: none"> ● pictures or examples of natural resources ● pictures or examples of items you can recycle to show the recycle symbol 	
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Science -Unit 3: Let's Explore Living Things

S2.2, S2.3, S2.4, S2.5, S2.6

Biblical Worldview Essential Questions

According to Genesis 3:17-18a, how did the Fall affect plants?

What are the main differences between a Creation worldview and an Evolution worldview?

What do plant and insect fossils tell us about life on Earth at the time of the flood?

8 weeks

Objectives	Methods	Resources	Assessment
<p>The students will...</p> <p>Chapter 8: How Plants Grow and Change</p> <ul style="list-style-type: none"> ● Explain the needs of plants ● Describe the parts of a plant ● Explain from the Bible God's design of plants and how the Fall affected plants ● Create a model of a plant ● Identify the life cycle of a plant ● Apply the scientific method to predict, observe, and classify ● Identify the relationship between the life cycle of plants and the ways seeds are scattered <p>Chapter 9: How Animals Grow and Change</p> <ul style="list-style-type: none"> ● Analyze the connections between an animal's needs and where it lives ● Apply the Bible's teaching to the design and behavior of animals ● Describe how an animal's physical features and 	<ul style="list-style-type: none"> ● class readings ● lecture ● discussion of Biblical concepts ● Activity worksheets ● Educational videos ● Investigations and experiments ● observation during class demonstrations ● project - habitats 	<ul style="list-style-type: none"> ● <i>BJU Press Science 2, Fifth Edition</i> ● <i>BJU Press Science 2 Activities</i> ● BJU online teacher resources ● Holy Bible ● Instructional Aids and Visuals <p>Chapter 8</p> <ul style="list-style-type: none"> ● pictures of living and non living things ● picture or plant with thorns ● picture of parts of a plant ● example or model of life cycle of a plant ● picture or seeds <p>Chapter 9</p> <ul style="list-style-type: none"> ● pictures of animals - baby and adult ● picture/video of squirrel burying seeds ● picture/video of woodpecker hiding seeds ● picture/video of animals making a burrow ● butterfly life cycle model or picture ● frog life cycle model or picture 	<ul style="list-style-type: none"> ● observation of class participation ● class assignments ● tests ● oral responses ● experiments ● project

<p>behaviors provide a means of survival</p> <ul style="list-style-type: none"> ● Describe the stages of animal life cycle ● Apply the engineering design process to solve a real-life problem <p>Chapter 10: Where Things Live</p> <ul style="list-style-type: none"> ● Analyze the relationship between plants and animals and their habitats ● Formulate an explanation for the relationship between dominion and habitats ● Differentiate water habitats from land habitats ● Explain how habitats change ● Apply inquiry skills of infer and communicate <p>Chapter 11: What Fossils Show Us</p> <ul style="list-style-type: none"> ● Evaluate different views of how fossils form ● Apply the science inquiry skills of observe, predict, and infer ● Differentiate types of fossils ● Explain what plant, insect, and dinosaur fossils show us ● Conduct online research, model, and communicate facts about a specific kind of dinosaur <p>Chapter 12: How the Human Body Works</p> <ul style="list-style-type: none"> ● Defend the importance of humans 		<p>Chapter 10</p> <ul style="list-style-type: none"> ● pictures of animal habitats ● picture of animals ● habitat project - habitat printable, crayons, glue <p>Chapter 11</p> <ul style="list-style-type: none"> ● picture of grand canyon ● animal tracks picture or printout ● picture of fossils ● picture of dinosaur fossils and different dinosaurs <p>Chapter 12</p> <ul style="list-style-type: none"> ● skeleton ● pictures of muscular system ● pictures of circulatory system ● pictures of respiratory system ● pictures of nervous system ● pictures of digestive system ● example of healthy food plate ● body printout with organs to put in place 	
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<ul style="list-style-type: none">● Identify parts of the human body systems● Explain how God designed the human body systems to work together● Explain why healthy eating and exercise are important● Formulate a prayer to God for His design of the human body systems● Create a model of the human body and organize body parts on the model			
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