

*Curriculum Guide for First Grade Science*

**Unit 1: General Science**

**4 weeks**

**What is a Biblical Worldview?  
How can we use our 5 senses to explore God’s world?  
How can a scientist glorify God through his/her work?**

<b>Objectives</b>	<b>Methods</b>	<b>Resources</b>	<b>Assessment</b>
<p>The students will</p> <ol style="list-style-type: none"> <li>1. Define science and explain from biblical truth why science is important.</li> <li>2. Identify the reason God gave people 5 senses.</li> <li>3. Describe what scientist do and how he/she can use science to help others.</li> <li>4. Define worldview and understand that every scientist has a world view.</li> <li>5. Identify God as the Creator of all things and that God made people in His image to care for the earth and to help others.</li> <li>6. Define and apply science process skills: -Observe -Classify -Measure -Infer -Predict -Communicate</li> <li>7. Explore the use of science tools.</li> <li>8. Compare and contrast observations.</li> <li>9. Identify parts and purpose of a scientific investigation.</li> <li>10. Explore STEM careers: Engineer</li> </ol>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Guided class discussion</li> <li>• Group reading</li> <li>• Classifying activity</li> <li>• Observation activity</li> <li>• Ice investigation activity</li> <li>• STEM design activity-“How do I keep my pencil on my desk?”</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher and student text: (Science 1-BJU Press)</li> <li>• Science tools:             <ol style="list-style-type: none"> <li>1. Balance scale</li> <li>2. Hand lens</li> <li>3. Thermometer</li> <li>4. Beaker</li> <li>5. Ruler/yard stick</li> </ol> </li> <li>• Insulated lunch bag, cups, ice</li> <li>• Tape, construction paper, pipe cleaners</li> <li>• Smelly markers</li> <li>• Objects to explore the 5 sense.</li> <li>• Sorting bears</li> </ul>	<ul style="list-style-type: none"> <li>• Student activity sheets</li> <li>• Chapter reviews</li> <li>• Chapter tests</li> <li>• Class discussions</li> <li>• Investigation sheet</li> </ul>

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**Unit 2: Life Science**

**5 weeks**

**How are plants and animal designed by God to survive and grow?**

<b>Objectives</b>	<b>Methods</b>	<b>Resources</b>	<b>Assessment</b>
<p>The students will</p> <ol style="list-style-type: none"> <li>1. Identify characteristics of living and non-living things.</li> <li>2. Classify living and non-living things.</li> <li>3. Identify the needs and parts of plants.</li> <li>4. Identify ways people use plants.</li> <li>5. Observe and draw parts of plants.</li> <li>6. Define life cycle and describe the stages in the life cycle of a plant.</li> <li>7. Compare and contrast a seedling with an adult plant and explain that God made plants to reproduce after their kind (Gen. 1:11).</li> <li>8. Draw conclusions about plant needs based on the investigation about God’s creational design of plants.</li> <li>9. Identify the needs of animals.</li> <li>10. Explain that God created animals and their environments to work together so they can survive and grow.</li> <li>11. Identify characteristics of mammals, fish and birds and classify them based on similar characteristics.</li> <li>12. Relate the function of animal body parts to the survival and growth of animals.</li> <li>13. Identify and explain the Bible’s explanation for animal death.</li> </ol>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Guided class discussion</li> <li>• Group reading</li> <li>• Classifying activity</li> <li>• Observation activity (Plant Needs)</li> <li>• STEM Activity (Unwanted Plants)</li> <li>• Animal research project</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher and student text: (Science 1-BJU Press)</li> <li>• Plants</li> <li>• Seeds</li> <li>• Plant cuttings-roots exposed</li> <li>• Hand lens</li> <li>• Large leaves</li> <li>• Information about George Washington Carver</li> </ul>	<ul style="list-style-type: none"> <li>• Student activity sheets</li> <li>• Chapter reviews</li> <li>• Chapter tests</li> <li>• Class discussions</li> <li>• Investigation sheet</li> <li>• Animal Research Project/presentation</li> </ul>

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**Unit 3: Our Bodies**

**5 weeks**

**How does God’s design of my body help me survive and grow?**

**How are people different from animals?**

**How can I care for myself and others in a way that glorifies God?**

<b>Objectives</b>	<b>Methods</b>	<b>Resources</b>	<b>Assessment</b>
The students will: 1. Observe and describe functions of body parts: Head, arm, leg, lungs, heart, stomach, bones, muscles, and brain 2. Explain ways God’s design of the human body helps us survive and grow. 3. Identify kind and respectful behavior. 4. Identify ways to prevent the spread of germs and healthy habits for strong teeth. 5. Formulate a hypothesis to determine the effects of washing hands on the germs. 6. Identify safe habits in the car, at home and at school. 7. Explain safety response in an emergency (fire safety).	<ul style="list-style-type: none"><li>• Lecture</li><li>• Guided class discussion</li><li>• Group reading</li><li>• Modeling activity (How My Lungs Work)</li><li>• Observation activity (rotting apple)</li><li>• Glitter vs. soap germ observation</li></ul>	<ul style="list-style-type: none"><li>• Teacher and student text: (Science 1-BJU Press)</li><li>• Straws, paper grocery bags, sandwich bags, tape, paper towel roll tubes</li><li>• Apple</li><li>• Glitter, hand soap and water</li></ul>	<ul style="list-style-type: none"><li>• Student activity sheets</li><li>• Chapter reviews</li><li>• Chapter tests</li><li>• Class discussions</li><li>• Investigation sheet</li></ul>

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**Unit 4: Earth-Space Science  
Seasons and Weather**

**6 weeks**

**How does God’s design of the stars and planets cause changes in the sky, weather and seasons?**

<b>Objectives</b>	<b>Methods</b>	<b>Resources</b>	<b>Assessment</b>
<p>The students will:</p> <ol style="list-style-type: none"> <li>1. Explain from Genesis how the sun, moon, earth and stars were formed and evaluate from the Bible and opposing view (Big Bang Theory)</li> <li>2. Describe the earth’s daily motion.</li> <li>3. Identify the sun as a star and the beneficial properties of the sun.</li> <li>4. Explain why God made the sun and describe and predict the sun’s movement.</li> <li>5. Formulate and test a hypothesis of why it is hard to see stars during the daytime.</li> <li>6. Observe simulated stars in various lighting.</li> <li>7. Identify groups of stars in the Big and Small Dippers</li> <li>8. Explain why God made the moon.</li> <li>9. Predict the moon’s phases and infer the cause for changes in the sky each day.</li> <li>10. Apply knowledge of the earth, moon ,sun and stars to praising God for His greatness and goodness.</li> <li>11. Sequence the cycle of seasons</li> <li>12. Observe temperature changes</li> <li>13. Compare and contrast characteristics of seasons where he/she lives with other regions</li> <li>14. Observe and record weather over a period of time.</li> <li>15. Define weather, water cycle, meteorologist.</li> </ol>	<ul style="list-style-type: none"> <li>• Lecture</li> <li>• Guided class discussion</li> <li>• Group reading</li> <li>• Exploration: “Stars in the Day” and “Changes in the sky.”</li> <li>• Recreate models to show the rotation of the earth and moon</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher and student text: (Science 1-BJU Press)</li> <li>• Unit videos on BJU Teacher Tools Website</li> <li>• Flashlights, foil</li> <li>• Globe</li> <li>• Paper model of the sun, earth and moon to demonstrate rotation</li> <li>• Silver/gold star stickers to recreate constellations</li> <li>• Thermometer</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Student activity sheets</li> <li>• Chapter reviews</li> <li>• Chapter tests</li> <li>• Class discussions</li> <li>• Investigation sheet</li> </ul>

*Curriculum Guide for 1<sup>st</sup> Grade Science*

**Unit 5: Energy**  
**Light, Sound, Communication**

**4 weeks**

**How can light and sound be used to care for God's creation?**  
**How can light and sound be used to communicate truths about God's world?**

<b>Objectives</b>	<b>Methods</b>	<b>Resources</b>	<b>Assessment</b>
The students will <ol style="list-style-type: none"><li>1. Identify what energy is</li><li>2. Defend, using Scripture, that God created light</li><li>3. Differentiate between objects that are transparent, translucent and opaque</li><li>4. Explain shadows</li><li>5. Identify that light travels in a straight line</li><li>6. Identify sound as a form of energy and travels in waves</li><li>7. Identify characteristics of volume</li><li>8. Identify ways that light and sound are used to communicate and explain how they can be used to help people</li></ol>	<ul style="list-style-type: none"><li>• Lecture</li><li>• Guided class discussion</li><li>• Group reading</li><li>• Investigations</li></ul>	<ul style="list-style-type: none"><li>• Teacher and student text: (Science 1-BJU Press)</li><li>• Unit videos on BJU Teacher Tools Website</li><li>• Flashlights</li><li>• Mirror</li><li>• Materials to make instruments, rubber bands</li><li>• Tuning fork</li><li>• Pinhole box</li></ul>	<ul style="list-style-type: none"><li>• Student activity sheets</li><li>• Chapter reviews</li><li>• Chapter tests</li><li>• Class discussions</li><li>• Investigation sheet</li></ul>

