

LITTLE ROCK CHRISTIAN ACADEMY





### CURRICULUM GUIDE

LITTLE ROCK CHRISTIAN ACADEMY



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# FIFTH GRADE

Bible

Math

**English** 

Science

History

STEM

### BIBLE

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  LANDSCAPE OF THE BIBLE	What literary genres are used in Biblical writing?  What are the common themes of the Bible?  What are the basic skills of Biblical literacy?	<ul> <li>✓ Use a reference to locate a verse in the Bible.</li> <li>✓ Explain the purpose of the Old Testament.</li> <li>✓ Identify how the Old Testament books are grouped into five categories.</li> <li>✓ Identify the books of the Law.</li> <li>✓ Explain the purpose of the New Testament.</li> <li>✓ Identify the four Gospels.</li> <li>✓ Identify how the New Testament books are grouped into four categories.</li> <li>✓ Use maps to identify the primary geographical region of the Bible.</li> </ul>
UNIT 2: CITIZENSHIP IN GOD'S KINGDOM	What do the covenants teach us about God and His chosen people?  How are the Ten Commandments still relevant today?	<ul> <li>✓ Define "sin" and explain how sin separates us from God.</li> <li>✓ Explain the promise of salvation through the Fall of Man.</li> <li>✓ Describe the importance of God's Covenant with Noah, Abraham, Israel, Moses, and David.</li> <li>✓ Explain God's New Covenant with Israel and Judah.</li> <li>✓ Explain how Jesus is the fulfillment of God's promise to Israel.</li> </ul>

UNIT 3:  JESUS AND THE GOSPELS	Why does the Bible include four accounts of Jesus's life?  What does it mean to have faith?	<ul> <li>✓ Compare and contrast each gospel writer's purpose and their intended audience.</li> <li>✓ Compare the four different accounts of Jesus Feeding the Five Thousand through the lens of each gospel writer.</li> <li>✓ Explain why the genealogy of Jesus is important.</li> <li>✓ Recognize the Trinity as Father, Son, and Holy Spirit.</li> <li>✓ Explain how each "I Am" statement reveals a characteristic of Jesus.</li> </ul>
UNIT 4: THE HOLY CHILD	How is the sovereignty of God displayed? What difference does obedience make?	<ul> <li>✓ Identify the roles of Elizabeth and Zechariah.</li> <li>✓ Describe Mary's response to the Angel.</li> <li>✓ Describe Joseph's encounter with the Angel.</li> <li>✓ Retell the story of the birth of Jesus.</li> <li>✓ Explain what was important about the magi's visit.</li> <li>✓ Recognize God's protection and provision (e.g. presentation in the Temple, escape to Egypt)</li> <li>✓ Describe Jesus as a child.</li> </ul>
UNIT 5: EARLY MINISTRY	How does the ministry of Jesus relate to us today?  What can we learn from the way Jesus lived His life on the Earth?	<ul> <li>✓ Identify the symbolism of baptism using the Baptism of Jesus as a model.</li> <li>✓ Describe how Jesus was able to resist temptation.</li> <li>✓ Explain how and why Jesus chose His first disciples.</li> <li>✓ Explain the significance of Jesus' encounter with the woman at the well.</li> </ul>
UNIT 6:  JESUS THE INSTRUCTOR	How does Jesus' teaching help us understand how to live as citizens in His kingdom?  How are a person's attitudes revealed?	<ul> <li>✓ Describe how the beatitudes listed in the Sermon on the Mount were counter-cultural.</li> <li>✓ Explain the instructions Jesus gave concerning prayer.</li> <li>✓ Explain why prayer is important.</li> <li>✓ Describe the truth that each line in The Lord's Prayer teaches.</li> </ul>

UNIT 7: JESUS THE HEALER	Why is it important to obey God's word rather than man-made religious laws?  How do the healings of Jesus confirm His deity?	<ul> <li>✓ Describe how Jesus went against the social norms of his time (e.g. healing the Leper, on the Sabbath).</li> <li>✓ Identity what role faith plays in healing.</li> <li>✓ Explain how healing is a picture of Jesus's atoning work on the cross.</li> </ul>
UNIT 8:  JESUS THE MINISTER	How does Jesus demonstrate His authority and compassion?  How is faith demonstrated through actions?  What is the purpose of difficult life circumstances?	<ul> <li>✓ Explain how Jesus shows His authority and compassion to the widow when he raises her son from the dead.</li> <li>✓ Describe the significance of the woman with the alabaster flask.</li> <li>✓ Describe how Jesus displays His authority when He calms the storm, and explain the disciples' reaction.</li> <li>✓ Explain how Jesus responds to the bleeding woman</li> </ul>
UNIT 9:  JESUS THE TEACHER	Why did Jesus use parables to teach a lesson?  How can we apply the lessons of the parables to our lives?	Explain now jests responds to the bleeding woman and Jairus's daughter.      Examine the meaning of Biblical parables.     Rich Man     The Sower     Mustard Seed     Lost Sheep     Good Samaritan     Prodigal Son
UNIT 10:  JESUS THE CHRIST	How was Jesus different than the Messiah the Jews expected?  How is the world's concept of greatest and least different from God's kingdom?	<ul> <li>Explain the significance of Jesus walking on the water.</li> <li>Describe the relationship between Jesus, the Pharisees, and the Sadducees.</li> <li>Explain the importance of Peter's recognition that Jesus is the Messiah.</li> <li>Explain the significance of the Transfiguration.</li> <li>Describe who is considered great in God's kingdom.</li> </ul>

### MATH

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  WHOLE NUMBERS AND THE FOUR OPERATIONS	How do the four mathematical operations of whole numbers relate to each other?  How does recognizing patterns in numbers help lead to mastering new concepts?	<ul> <li>✓ Read and write numbers to 10,000,000 in expanded form, standard form, and word form, and identify the value of each digit.</li> <li>✓ Use patterns and powers of 10 to multiply and divide.</li> <li>✓ Multiply and divide by two-digit numbers.</li> <li>✓ Use order of operations to evaluate numeric expressions.</li> <li>✓ Round and compare whole numbers.</li> <li>✓ Solve multi-step problems using different strategies.</li> </ul>
UNIT 2: FRACTIONS AND MIXED NUMBERS	Why is it important to understand mathematical relationships?  How do fractions give a more accurate representation than a whole number?  How does analyzing pieces help to reveal and understand the whole picture?	<ul> <li>✓ Understand and apply the relationship among fractions, mixed numbers, and division expressions.</li> <li>✓ Add and subtract fractions and mixed numbers with unlike denominators.</li> <li>✓ Estimate sums and differences of fractions and mixed numbers.</li> <li>✓ Solve real-world problems involving fractions and mixed numbers.</li> </ul>

UNIT 3:  MULTIPLYING AND DIVIDING FRACTIONS AND MIXED NUMBERS	How can prior knowledge be used to connect and expand a concept?  How can a process be applied to different scenarios?	<ul> <li>✓ Multiply and divide fractions and mixed numbers.</li> <li>✓ Solve real-world problems involving multiplication and division of fractions and mixed numbers.</li> </ul>
UNIT 4: DECIMALS  UNIT 5:	Why is order important?  How can an organized system be used to compare and order?  How do patterns help develop strategies in problem solving?	<ul> <li>✓ Read, write, compare, order, and round decimals.</li> <li>✓ Rewrite three-place decimals as fractions or mixed numbers in simplest form.</li> <li>✓ Add, subtract, multiply, and divide decimals.</li> </ul>
FOUR OPERATIONS OF DECIMALS	OPERATIONS CONTRACTOR OF THE PROPERTY OF THE P	<ul> <li>Estimate decimal sums, differences, products, and quotients.</li> <li>Convert from a larger metric unit to a smaller unit.</li> <li>Solve word problems involving decimals.</li> </ul>
UNIT 6: VOLUME	How are spatial relationships used to draw, construct, model, and represent real life situations?	<ul> <li>✓ Find the volumes of cubes and rectangular prisms.</li> <li>✓ Find the capacity of a rectangular container.</li> </ul>
	How are formulas used to evaluate and organize spatial understanding?	✓ Solve real-world problems involving volume.

UNIT 7: LINE PLOTS AND THE COORDINATE PLANE	How does visual organization provide deeper understanding of an idea?  How can line plots be used to identify patterns or draw conclusions?	<ul> <li>Make and interpret line plots with fractional data.</li> <li>Use fractions and their operations to solve problems using data.</li> <li>Read and plot points on a coordinate plane.</li> <li>Use ordered pairs to draw line graphs.</li> <li>Identify and extend number patterns.</li> </ul>
		✓ Identify the relationship between two sets of numbers.
UNIT 8: POLYGONS	How are attributes used to classify?  In what real-world situations would it be helpful to understand the properties of triangles and hierarchy of polygons?	<ul> <li>✓ Identify right, isosceles, equilateral, and scalene triangles.</li> <li>✓ Classify triangles by their side lengths and angle measures.</li> <li>✓ Classify polygons using a hierarchy.</li> </ul>
UNIT 9: RATIO	When and why would comparisons be used in the real world?  How can ratios be used to communicate data?	<ul> <li>✓ Read and write ratios.</li> <li>✓ Find equivalent ratios using multiplication or division.</li> <li>✓ Solve real-world problems involving ratio.</li> </ul>
UNIT 10: PERCENT	When is it most beneficial to use a fraction or a decimal when calculating percent?  How can percentages be used in real-world scenarios?	<ul> <li>✓ Relate a percent to parts of a whole.</li> <li>✓ Express fractions and decimals as percentages and vice versa.</li> <li>✓ Find the value of a percent of a quantity, given the amount and the percent.</li> <li>✓ Solve real-world problems involving percents.</li> </ul>

### **UNIT 11: ALGEBRA**

How can inverse operations and properties of mathematics be applied to solve for the unknown?

How can we use patterns in math to interpret real-world scenarios?

- ✓ Model one-step linear equations with one variable.
- ✓ Generate a numerical pattern when given a rule in the form y = ax or y =x + a.
- ✓ Recognize the difference between additive and multiplicative numerical patterns given in a table or graph.
- ✓ Recognize and use inverse relationships.
- ✓ Represent and solve problems using variables.
- ✓ Identify parts of an expression using mathematical terms.
- ✓ Simplify expressions and identify inequalities.

### ENGLISH READER'S WORKSHOP

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: THE MIND OF A READER	What strategies do effective readers use to help them comprehend texts?  How does new vocabulary benefit a growing reader?	<ul> <li>✓ Use ideas (e.g. illustrations, titles, topic sentences, keywords, and foreshadowing clues) to make and confirm predictions.</li> <li>✓ Ask relevant questions, seek clarification, and locate facts and details about stories and other texts, and support answers with evidence from the text.</li> <li>✓ Differentiate between and relate text-to-self, text-to-text, and text-to-world connections.</li> <li>✓ Ask inferential and complex questions that lead to deeper understanding of the text.</li> <li>✓ Use evidence to predict before, infer during, and draw conclusions after reading.</li> <li>✓ Identify the main events in a text to properly order the sequence of events.</li> <li>✓ Recognize unknown words and craft meaning using contextual clues or other resources.</li> </ul>

### UNIT 2: How does understanding the elements of a story ✓ Recognize the elements of lead to greater understanding of the text and plot development: exposition, **FICTION** connections with the world? rising action, climax, falling **READING** action, resolution. ✓ Explain how an incident gives rise to or foreshadows future events. ✓ Analyze character development in various plots, and its impact on the sequence of events in a story. ✓ Determine a theme of a story from details in the text. ✓ Summarize the main ideas and supporting details in a text in ways that maintain meaning and logical order. ✓ Explain the effect of a historical event on character development, types of conflict, and/or vocabulary implemented. ✓ Identify the point of view within the story, and recognize how perspective influences how events are described. Analyze the similarities and differences between an original text and its dramatic adaptation.

### UNIT 3: How does understanding different viewpoints ✓ Use text features to gain an overview of the text. within non-fiction texts lead to greater under-**NON-FICTION** standing of the text and the world? READING ✓ Identify and analyze how nonfiction text structures (e.g. sequencing events, main idea, cause and effect, problem and solution, compare and contrast) influence the relationships among the ideas. ✓ Identify reasons and evidence an author uses to support a point(s) in the text. Differentiate facts from opinions. ✓ Use factual or quantitative information to deepen understanding of the text. (e.g. charts, graphs) ✓ Explain different functions of the author's viewpoint and purpose. ✓ Recognize unknown words from texts and craft meaning using contextual clues, roots, morphemes, and classroom resources. **UNIT 4:** How do authors effectively use literary elements ✓ Evaluate the impact of sensory to create and develop a meaningful short fiction details, imagery, and figurative **SHORT STORIES** text? language in literary text. AND POETRY ✓ Analyze how poets use alliteration, internal rhyme, What makes short stories unique compared to onomatopoeia, and rhyme other types of fiction? scheme to convey meaning. ✓ Recognize the elements of plot development in short stories What are the elements of an effective poem or and poems. short story? Identify the tone and mood, and explain how the author uses multimedia elements. ✓ Recognize unknown words and craft meaning using contextual clues or other resources.

### ENGLISH WRITER'S WORKSHOP

### **NUMBER**

### **ESSENTIAL** QUESTIONS

### **LEARNING GOALS**

"Students will be able to ..."

### UNIT 1:

INTRO TO **GRAMMAR AND** THE WRITING **PROCESS** 

How does an author develop a story for an intended audience?

How does understanding English mechanics and usage improve our reading and writing?

### Writing:

- ✓ Use the writing process steps to improve writing: prewriting, first draft, revised draft, final draft.
- ✓ Compose a well-written paragraph. (topic sentence, supporting details, closing sentence).
- ✓ Respond appropriately to a question or prompt (e.g. RACE).

### Grammar:

- Revise and edit fragments and run-on sentences in writing.
- ✓ Identify how nouns, verbs, and prepositions function to create a complete sentence.
- ✓ Recognize and correct mistakes in capitalization.

UNIT 2:	Why is organization important in writing?	Writing:
NARRATIVE WRITING	How can varying sentence structures in writing improve meaning and interest for the reader?	✓ Create and structure a personal narrative using the writing process to demonstrate understanding of plot.
		✓ Use story elements effectively in narrative writing.
		✓ Effectively implement dialogue in writing to enhance the clarity of characterization and setting.
		Grammar:
		✓ Edit and revise based on learned skills in punctuation, capitalization, and grammar.
		✓ Recognize and use adjectives correctly to enhance writing.
		<ul> <li>✓ Recognize sentence patterns         with action and linking verbs         (e.g. direct objects, predicate         adjective, predicate noun).</li> </ul>

### UNIT 3:

### **NONFICTION** WRITING

How do I use expository writing to examine a topic and convey ideas, concepts, and information

How do writers influence their audience?

### Writing:

- ✓ Use graphic organizers to structure information as a precursor to expository writing (e.g. compare/contrast, cause/effect, process).
- ✓ Sequence events to show order in writing.
- Use transition words effectively.
- ✓ Display the components of persuasion in a piece of writing: thesis, argument with evidential support, and strong conclusion.
- ✓ Use visual presentations to express a clear description.

### Grammar:

- ✓ Review and edit writing, applying both mastered and current grammar and punctuation skills (e.g. transition words).
- ✓ Identify nouns working as different parts of speech.
- ✓ Recognize and use the regular, comparative, and superlative forms of adjectives and adverbs in their writing.
- ✓ Write legibly, using developmentally appropriate spelling and conventional grammar, continuing to apply earlier standards with greater complexity.

UNIT 4:	How can information be used to express an idea?	Writing:
RESEARCH WRITING		✓ Construct good research questions.
		✓ Develop a plan for research and gather relevant information from reliable sources.
		✓ Determine if a source is presenting facts or the opinion of the author.
		✓ Demonstrate understanding of the difference between plagiarism and paraphrasing when taking notes.
		✓ Synthesize the research into a written five paragraph report.
		✓ Form an introductory paragraph using a hook, bridge, and thesis statement.
		<ul> <li>✓ Create a works cited page and correctly organize sources (e.g. MLA).</li> </ul>
		Grammar:
		✓ Use pronouns correctly.
		✓ Write legibly, using developmentally appropriate spelling and conventional grammar, continuing to apply earlier standards with greater complexity.

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### **POETRY AND CREATIVE** WRITING

How can figurative language and sensory detail enrich and enhance short stories?

### Writing:

- ✓ Write with figurative language devices in nonfiction and fiction writing.
- ✓ Write with sensory detail to bring strong imagery to their writing.
- ✓ Use the story elements to guide the planning of a fictional short story.
- ✓ Identify the story elements in short stories.
- ✓ Incorporate theme into creative writing (e.g. poetry, *short story*).

### Grammar:

✓ Write legibly, using developmentally appropriate spelling and conventional grammar, continuing to apply earlier standards with greater complexity.

### SCIENCE

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: INTRODUCTION TO SCIENCE	What are the lab safety practices in science?  How are the different types of science tools used in scientific measurements?	<ul> <li>✓ Identify the characteristics of a scientist.</li> <li>✓ Explain the importance of lab safety.</li> <li>✓ Estimate measurements of length, mass, volume, and temperature in metric.</li> <li>✓ Accurately measure length, mass, volume, and temperature in metric units using proper tools.</li> </ul>
UNIT 2: SCIENTIFIC METHOD	What steps do scientists use to logically get from question to answer?	<ul> <li>✓ Explain the steps in the scientific method.</li> <li>✓ Classify variables as independent or dependent.</li> <li>✓ Complete a fair test that answers a hypothesis using the scientific method.</li> <li>✓ Analyze and communicate results from a given experiment.</li> </ul>

UNIT 3: ASTRONOMY	In what ways do Earth's position and relationship with the sun and moon cause moon phases, tides, seasons, and life?	<ul> <li>✓ Compare and contrast the characteristics of the sun, moon, and Earth.</li> <li>✓ Describe how the sun's location impacts life on Earth.</li> <li>✓ Explain what causes seasons.</li> <li>✓ Explain how gravity influences the shape and motion of objects in the solar system.</li> <li>✓ Describe how changes in the moon's phases affect the Earth.</li> </ul>
UNIT 4: MATTER	How does investigating the water cycle provide greater understanding for physical changes and states of matter?  How can characteristic properties be used to distinguish one form of matter from another?	<ul> <li>Explain the steps in the water cycle.</li> <li>Contrast physical and chemical changes.</li> <li>Identify the physical and chemical properties of matter.</li> <li>Explain how and why matter changes states.</li> </ul>

UNIT 5: THE BRAIN	What are the parts of the brain and how do their functions impact learning and memory?  How do habits impact brain development?	<ul> <li>✓ Identify and locate the main parts of the brain on a given diagram.</li> <li>✓ Explain the functions of the lobes of the brain.</li> <li>✓ Explain how memory and learning occur in each part of the brain.</li> <li>✓ Describe how the brain can be affected by outside influences and the consequences of various habits that affect the brain (e.g. screen time, diet, sleep, substance abuse).</li> </ul>
UNIT 6: SIMPLE MACHINES	How can simple machines use forces to make work easier?  How do forces impact movement?	<ul> <li>Explain the difference between potential and kinetic energy.</li> <li>Identify potential and kinetic energy.</li> <li>Compare balanced and unbalanced forces.</li> <li>Identify the six simple machines and their functions.</li> </ul>
UNIT 7: HUMAN IMPACT	Why is clean water essential for all living things?  What is the impact of our reliance on fossil fuels, and how can alternate energy sources help mitigate those effects?	<ul> <li>Explain the importance of protecting and maintaining water resources.</li> <li>Explain how human use and disposal of plastic impact ocean life.</li> <li>Describe the ways water can be used as an energy resource.</li> <li>Identify alternative energy resources.</li> </ul>

UNIT 8:  ROCKS AND MINERALS	How do weathering and erosion contribute to transformations in the rock cycle?  How can the properties of minerals be used for identification?	<ul> <li>✓ Classify rocks by their properties.</li> <li>✓ Explain the different steps in the rock cycle.</li> <li>✓ Identify an unknown mineral through a series of tests.</li> <li>✓ Describe how Earth's surface changes due to weathering and erosion.</li> </ul>
UNIT 9: LIGHT AND SOUND WAVES	How can waves be described by their properties?	<ul> <li>✓ Describe the properties of waves.</li> <li>✓ Explain how light and sound waves interact with matter.</li> <li>✓ Identify how waves are produced.</li> </ul>

### HISTORY

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: LANDSCAPE OF OUR WORLD	How do humans navigate the world, both in reality and on the map?  How do the physical characteristics of places and regions impact life?	<ul> <li>✓ Use geographic tools including grid systems, legends, symbols, compass rose, and map key to interpret maps.</li> <li>✓ Locate places in the world using longitude and latitude coordinates.</li> <li>✓ Locate and identify the seven continents and their various geographic regions.</li> </ul>
UNIT 2: CITIZENSHIP	What is social studies? How do the strands of social studies influence one another?  How does God use everything that happens as part of His story?  What are the rights and responsibilities of citizens?	<ul> <li>✓ Describe what it means to be a good citizen at home, school, church, and community.</li> <li>✓ Describe actions that can improve the school and community.</li> <li>✓ Explain how the nature of citizenship varies among governments.</li> <li>✓ Identify the roles and responsibilities of citizens in various governments (e.g. democracy, monarchy, communism, and dictatorship).</li> <li>✓ Explain how opportunities for citizens to participate in and influence the political process varies.</li> <li>✓ Discuss the importance of national holidays (e.g. Veterans' Day, Memorial Day, Martin Luther King, Jr., Fourth of July, and Presidents' Day).</li> </ul>

UNIT 3: GOVERNMENT FOUNDATIONS	How is the structure of the United States government rooted in the Bible?  How have the founding principles and documents shaped the United States government?	<ul> <li>✓ Explain the importance of the Constitutional Convention and the document of the Constitution itself in establishing our current structure of government.</li> <li>✓ Describe the role and responsibilities of each branch of government.</li> <li>✓ Recognize the importance of the checks and balances of the three branches of government.</li> <li>✓ Demonstrate understanding of checks and balances in our country's laws (e.g. creating, passing, enforcing, challenging).</li> <li>✓ Differentiate between the powers of federal and state governments.</li> <li>✓ Explain why the Bill of Rights was added to the Constitution.</li> </ul>
UNIT 4: HISTORICAL ERAS	How can historical eras be viewed through a biblical lens?  How can change be evaluated?	<ul> <li>✓ Plot major American eras, events, and wars on a timeline.</li> <li>✓ Demonstrate general knowledge of the decades in the 20th and 21st century and what makes each decade unique (i.e. key cultural influences).</li> <li>✓ Examine changes in the United States during key historical periods for the following arenas: social, cultural, economic, geographical, political, and technological.</li> </ul>

### UNIT 5: How should humans steward God's gifts? ✓ Explain patterns of work and economic activities in the **ECONOMICS** United States. What factors should be considered when making ✓ Identify and explain how an economic decision? geographic factors influence location of economic activities in the United States. ✓ Evaluate weighing the costs and benefits of economic decision making (e.g. opportunity costs, scarcity). ✓ Describe the role of producers, consumers, and government on goods and services. ✓ Identify how supply and demand affects price. ✓ Analyze how advertising affects a buyer's decision.

### STEM

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: INTRODUCTION TO VEX ROBOTICS	What is robotics?	✓ Learn to use the VEX IQ system.
UNIT 2: ENGINEERING	How is the Engineering Design Process used in robotics?	<ul> <li>✓ Use the engineering processes to connect to real-world applications.</li> <li>✓ Build teamwork and collaboration skills.</li> <li>✓ Design creative solutions and innovate through experimentation.</li> </ul>
UNIT 3: COMPETITIONS	How can sensors and gears improve robot design?	✓ Demonstrate knowledge of sensors, programming, and overall problem solving.



Bible

Math

**English** 

Science

History

STEM

### BIBLE

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  GENESIS - THE BEGINNING: GOD'S PROMISE	Who is God?  How do we see the need for salvation and God's plan for redemption of mankind?  How does God redeem things that were meant for evil?	<ul> <li>✓ Locate the region of the Garden of Eden.</li> <li>✓ Explain how the Fall points to mankind's need for a Savior.</li> <li>✓ Analyze how the covenants that God established with his prophets (e.g. <i>Abraham</i>, <i>Jacob</i>) point to His faithfulness.</li> <li>✓ Investigate how the nation of Israel began and why they settled in Egypt.</li> </ul>
UNIT 2: EXODUS-THE RESCUE: GOD OF POWER	How does God's delivery of the nation of Israel foreshadow His heart to redeem His people?  How did God's dwelling among the Israelites set them apart from every other nation?	<ul> <li>✓ Describe how God used Moses to set His people free.</li> <li>✓ Explain the significance of Passover and how it points to Jesus.</li> <li>✓ Identify how God provided for His people in the wilderness.</li> <li>✓ Discuss the significance of the tabernacle.</li> </ul>

UNIT 3: LEVITICUS/ HEBREWS	What is required to please God?  When I am unfaithful, how does God demonstrate His faithfulness?  How does Jesus fulfill the Law?	<ul> <li>Examine God's standards for a community of worshipers.</li> <li>Explain how the Law and sacrifices point to mankind's need for a Savior.</li> <li>Describe why the author of Hebrews claims Jesus is the "better Moses," "the Great High Priest," and a "better sacrifice."</li> </ul>
UNIT 4:  DEUTERONOMY/ JOSHUA	How does God respond to our disobedience?  How does the book of Joshua show fulfillment of God's promises to Abraham?	<ul> <li>✓ Explain the consequences of Moses' disobedience.</li> <li>✓ Compare and contrast the roles of Moses and Joshua.</li> <li>✓ Chart the Israelites takeover of the Promised Land.</li> </ul>
UNIT 5: EZRA AND NEHEMIAH	How does God restore Israel?  How does God demonstrate His faithfulness to  His people during their return to Jerusalem?	<ul> <li>Examine the lives of Ezra and Nehemiah.</li> <li>Identify ways in which God fulfilled His promises to His people.</li> <li>Determine the value of community in accomplishing God's will.</li> </ul>

UNIT 6: ROMANS	What is the Gospel?	<ul> <li>✓ Identify and discuss the metanarrative of the Bible.</li> <li>✓ Record the verses of the "Roman Road."</li> <li>✓ Practice sharing the Gospel.</li> </ul>
UNIT 7: PHILIPPIANS	How should a Christian live?	<ul> <li>✓ Discuss the major themes of Philippians.</li> <li>✓ Design a presentation of practical ways to honor God in daily life.</li> </ul>
UNIT 8:  MAJOR WORLD RELIGIONS: JUDAISM, CHRISTIANITY, AND ISLAM	How should a Christian interpret world religions through a Biblical worldview?  What do each of these Abrahamic religions teach about Jesus?	<ul> <li>✓ Explain the basic beliefs of Christianity, Judaism, and Islam.</li> <li>✓ Identify the connections between Christianity, Judaism, and Islam.</li> <li>✓ Investigate each religion's claims about Jesus.</li> <li>✓ Conclude how a Christian could identify with and witness to followers of Judaism and Islam.</li> </ul>

### MATH

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  NUMBER CONCEPTS	Why is developing a strong number sense beneficial?  How do rational numbers relate to integers?	<ul> <li>✓ Identify and represent integers on a number line.</li> <li>✓ Identify and describe absolute value and opposite integers.</li> <li>✓ Compare and order fractions, mixed numerals, decimals, and percents using words and symbols.</li> </ul>
UNIT 2:  COMPARING AND ORDERING NUMBERS	What relationships are revealed when breaking numbers into factors?  How does changing the order of operations affect the outcome when simplifying an expression?	<ul> <li>✓ Evaluate positive rational number numerical expressions using the order of operations.</li> <li>✓ Investigate and describe concepts of positive exponents and perfect squares and cubes.</li> </ul>
UNIT 3:  MULTIPLYING AND DIVIDING FRACTIONS/ DECIMALS	What relationship exists between multiplication and division of fractions by fractions?	<ul> <li>✓ Divide fractions and mixed numbers.</li> <li>✓ Recognize that dividing by a rational number and multiplying by its reciprocal result in equivalent values.</li> <li>✓ Determine, with and without computation, whether a quantity is increased or decreased when multiplied by a fraction, including values greater than or less than one.</li> </ul>

UNIT 4: RATIOS	When is it useful to relate one quantity to another?  What is the connection between a ratio and a fraction or decimal?	<ul> <li>✓ Describe and compare data, using ratios, and use appropriate notations.</li> <li>✓ Investigate and describe fractions, decimals, and percents as ratios.</li> <li>✓ Demonstrate equivalent relationships among fractions, decimals, and percents, and ratios.</li> </ul>
UNIT 5:  MEASURES OF CENTER	How can the mean and median to describe a data set?  How can data using different measures and graphics be compared and contrasted?	<ul> <li>✓ Represent numeric data graphically, including dot plots.</li> <li>✓ Take the median, mode, range; and use these summaries to describe the data distribution.</li> <li>✓ Display and interpret the data with graphical representations.</li> </ul>
UNIT 6: RATES	How can relationships between fractions, decimals, percents, and ratios be applied to solve real-world problems?	<ul> <li>✓ Investigate and describe fractions, decimals, and percents as ratios.</li> <li>✓ Demonstrate equivalent relationships among fractions, decimals, percents, and ratios.</li> <li>✓ Solve real-world problems involving addition, subtraction, multiplication, and division with decimals to thousandths, including problems that involve money in decimal notation.</li> </ul>

UNIT 7: PERCENTS	How can using percentages to compare part to whole be beneficial?	<ul> <li>✓ Describe and compare data, using ratios, and use appropriate notations.</li> <li>✓ Investigate and describe fractions, decimals, and percents as ratios.</li> <li>✓ Demonstrate equivalent relationships among fractions, decimals, and percents, and ratios.</li> <li>✓ Add and solve problems using ratios, percents, and rates.</li> </ul>
UNIT 8: INTEGERS	How do operations with integers differ from operations with whole numbers?	<ul> <li>✓ Add, subtract, multiply, and divide integers.</li> <li>✓ Identify and describe absolute value and opposite integers.</li> </ul>
UNIT 9: ALGEBRAIC EXPRESSIONS	How can real-world problems be solved using algebraic expressions?  What is equivalence?	<ul> <li>✓ Solve one-step linear equations in one variable involving whole numbers and positive rational solutions.</li> <li>✓ Identify parts of an expression using mathematical terms (e.g. sum, term, product, factor, quotient, coefficient).</li> <li>✓ Simplify and factor algebraic expressions.</li> </ul>

UNIT 10: ALGEBRAIC EQUATIONS	How can quantities, patterns, and relationships with variables be represented?	<ul> <li>✓ Solve one-step linear equations in one variable involving whole numbers.</li> <li>✓ Model, solve, and write one-variable, one-step equations and inequalities to represent constraints or conditions within problems.</li> <li>✓ Use variables to represent two quantities in a real-world problem that change in relationship to one another.</li> <li>✓ Identify parts of an expression using mathematical terms.</li> <li>✓ Add like terms.</li> </ul>
UNIT 11: GEOMETRY	How does the object to be measured influence the chosen method of measurement?  How can space be defined using numbers and measurements?	<ul> <li>✓ Write equations that represent problems related to the area of rectangles, parallelograms, trapezoids, and triangles and volume of various prisms.</li> <li>✓ Use the radius and diameter to find the circumference of a circle.</li> <li>✓ Find the area of a circle.</li> <li>✓ Recognize nets and find surface area of cubes, rectangular prisms, triangular prisms, and square pyramids.</li> <li>✓ Find the volume of prisms.</li> </ul>

# ENGLISH READER'S WORKSHOP

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: A READER'S SKILLSET AND TOOLKIT	How do readers demonstrate fluency and comprehension?  How do effective readers construct meaning from texts?	<ul> <li>✓ Comprehend and respond to a variety of texts by applying a variety of reading strategies (e.g. visualizing, questioning, making text connections, sequencing events, summarizing, predicting, making inferences/ drawing conclusions, comparing and contrasting.)</li> <li>✓ Cite text evidence to support an analysis of what a text states, using background knowledge to draw inferences from the text.</li> <li>✓ Identify roots and morphemes to understand and implement new vocabulary.</li> </ul>

### UNIT 2: **FICTION**

**READING** 

How does an author craft the elements and plot of a story?

How does a reader construct a theme using textual evidence?

Why is reading beyond the text important?

- Break down and map the elements of plot development: exposition, conflict, rising action, climax, falling action, and resolution.
- ✓ Describe inciting incidents that advance the story or novel, explaining how each incident gives rise to or foreshadows future events.
- Explain how characters impact conflict and respond and/or change as the plot moves toward resolution.
- ✓ Determine a theme of a story from details in the text. (Theme defined as topic plus author's opinion on topic.)
- ✓ Identify the point of view within the story, and recognize how perspective influences how events are described.
- ✓ Infer the theme from details in the text.
- ✓ Analyze the similarities and differences between an original text and its dramatic adaptation (e.g. tone, mood, characterization).

### UNIT 3:

### NON-FICTION READING

How does a nonfiction text's structure influence its viewpoint?

How does a reader recognize an author's viewpoint or personal bias?

- ✓ Use text features to preview the main ideas and text structure (e.g. charts, maps, diagrams).
- Explain how the organization and various text structures develop main ideas and viewpoints (e.g. sequence of events, main idea, cause and effect, problem and solution, compare and contrast).
- ✓ Identify, outline, and summarize non-fiction texts.
- ✓ Differentiate fact from opinion, and recognize textual bias.
- ✓ Use factual or quantitative information (e.g. *maps*, *charts*, *illustrations*) to deepen understanding of the text.
- ✓ Compare between multiple texts to identify organizational structures and synthesize common viewpoints.
- Recognize unknown words from texts and craft meaning using contextual clues, roots, morphemes, and classroom resources.

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POETRY, FABLES, MYTHS, AND **ANCIENT STORIES** 

How are common themes represented in different eras of storytelling?

How can history or cultural context enhance a reader's perspective and deepen understanding?

- ✓ Analyze how figurative language in poetry impacts tone and theme.
- ✓ Analyze texts from a variety of time periods, cultures, and genres (e.g. Biblical stories, Greek myths, Aesop's fables).
- ✓ Examine the structure of a fable.
- ✓ Analyze the elements of Greek mythology.
- ✓ Trace the development of story structure and elements throughout different time periods and cultures (e.g. early dramas, Aristotle's story structure).
- ✓ Compare and contrast how story elements are represented in different time periods and story styles.

### ENGLISH WRITER'S WORKSHOP

### UNIT NUMBER & NAME

### **ESSENTIAL QUESTIONS**

### **LEARNING GOALS**

"Students will be able to ..."

### UNIT 1:

DESCRIPTIVE WRITING AND GRAMMAR STUDY How do authors use detail and elaboration to help a reader maintain engagement through a text?

How can writers improve the structure, complexity, and beauty of their sentences?

### Writing:

- ✓ Use elements of the writing process (e.g. *prewriting*, *drafting*, *revising*, *editing*, *and publishing*) to compose and improve writing.
- ✓ Write descriptively using vivid language, figurative language, point of view, dialogue, and character development.
- ✓ Make connections to literature and respond appropriately to a question or a prompt (e.g. *RACE*).

#### Grammar:

- Apply understanding of subjects and verbs to correct fragments and run-on sentences in writing.
- Recognize and correct mistakes in capitalization and usage.
- ✓ Correctly use the regular, comparative, and superlative forms of adjectives and adverbs in writing.
- ✓ Use punctuation correctly in a variety of sentence types (e.g. *simple, compound, and complex*).

### UNIT 2:

### **POETRY AND** NARRATIVE WRITING

How does order lend to the overall comprehension of the written word?

What are the components of writing a narrative, and what kind of details bring it to life?

What patterns do we see in sentences, and how do they make our communication more clear and effective?

### Writing:

- ✓ Plan and construct a narrative based on understanding of plot and through using the writing process, using mentor literature.
- ✓ Demonstrate effective dialogue in writing to enhance the clarity of internal and external characteristics.
- ✓ Demonstrate revision strategies.
- Create an introduction and thesis statement.

#### Grammar:

- ✓ Label parts of speech in a sentence.
- ✓ Write legibly, using developmentally appropriate spelling and conventional grammar, continuing to apply earlier standards with greater complexity.

### UNIT 3:

### NONFICTION WRITING AND RESEARCH

How do students write informative/ explanatory texts to examine a topic and convey ideas, concepts, and information clearly?

How does punctuation change the way information is interpreted?

How can word choice influence an author's style and tone?

### Writing:

- ✓ Use graphic organizers to organize information from various non-fiction texts as a precursor to writing.
- Effectively use transition words.
- ✓ Sequence events to show order.
- ✓ Follow the research process for writing: (e.g. outline, rough draft, revision, final copy, works cited).
- ✓ Demonstrate understanding between plagiarism and paraphrasing.

#### Grammar:

- Recognize and use punctuation marks for proper mechanics.
- ✓ Appropriately implement different functions of parts of speech.

UNIT 4:	
CREATIVE WRITING AND DIGITA	ı

Who or what determines proper grammar?

Why is writing in other disciplines important?

### Writing:

- ✓ Master writing across the curriculum.
- ✓ Learn the history of propaganda and how to implement it.
- ✓ Grasp the art of presentation.
- ✓ Prepare a presentation digitally.
- ✓ Write an argumentative paper using credible sources (e.g. claim, evidence).

#### Grammar:

✓ Write legibly, using developmentally appropriate spelling and conventional grammar, continuing to apply earlier standards with greater complexity.

# SCIENCE

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: SCIENTIFIC INVESTIGATIONS	What steps do scientists use to logically get from question to answer?  How are observations and measurements recorded?	<ul> <li>✓ Conduct scientific investigations and make qualitative and quantitative observations.</li> <li>✓ Measure and record the precise or approximate mass, length, or volume for a given object or substance.</li> <li>✓ Write a hypothesis in a way that identifies the independent and dependent variables.</li> <li>✓ Conduct an experiment to test for reliability by changing variables.</li> <li>✓ Analyze data to formulate explanations, and communicate data.</li> </ul>

UNIT 2: MATTER	What properties are used to identify elements?  What are chemical bonds, and what role do they play in chemical reactions?	<ul> <li>✓ Label the parts of an atom and describe the function of each part.</li> <li>✓ Contrast the atoms of different elements.</li> <li>✓ Identify pure substances by chemical symbols and formulas.</li> <li>✓ Explain how two or more atoms interact to form new substances which are held together by bonds.</li> </ul>
		<ul> <li>✓ Differentiate between elements and compounds.</li> <li>✓ Show how chemical equations can be used to model chemical changes.</li> </ul>
UNIT 3: THE ATMOSPHERE	What is the structure of the earth's atmosphere, and how does it support life on earth?	✓ Explain the role of solar energy in driving most natural processes within the atmosphere, the hydrosphere, and on Earth's surface.
	How do humans positively and negatively affect the atmosphere?	<ul> <li>✓ Explain the role of the sun in the formation of most energy sources on Earth.</li> <li>✓ Describe the properties</li> </ul>
		of air.  ✓ Describe the structure and dynamics of Earth's atmosphere.
		<ul> <li>Predict how atmospheric conditions change with altitude.</li> </ul>
		✓ Identify natural and human-caused changes to the atmosphere, and state the importance of protecting and maintaining air quality.

UNIT 4: THE WEATHER	How do thermal energy and atmospheric conditions influence weather?  How can weather maps be used to obtain information about fronts, systems, and basic atmospheric measurements?	<ul> <li>✓ Explain the process of cloud formation.</li> <li>✓ State the role of thermal energy in weather-related phenomena including thunderstorms and hurricanes.</li> <li>✓ Explain the effect pressure, temperature, and humidity have on the weather.</li> <li>✓ Relate atmospheric measurements to weather conditions.</li> <li>✓ Predict the weather based on information from weather maps.</li> </ul>
UNIT 5: THE EARTH'S SURFACE	Why does the Earth have layers?  How do the layers of the Earth cause major geological events?	<ul> <li>✓ Identify the structure and composition of each layer of the earth.</li> <li>✓ State how the lithosphere and asthenosphere cause plates to move.</li> <li>✓ Explain how the earth is separated by plates.</li> <li>✓ Describe how plate tectonics cause major geological events such as ocean basins, earthquakes, volcanic eruptions, mountain building, and mid-ocean ridges.</li> </ul>

UNIT 6: ENERGY AND THE EARTH'S RESOURCES	How are renewable and nonrenewable resources different?	<ul> <li>✓ Compare the renewability time period for certain natural resources.</li> <li>✓ Explain the role of the sun in the formation of Earth's energy resources.</li> <li>✓ Analyze the cost and benefits to energy resources such as coal, oil, natural gas, nuclear power, biomass, wind, hydropower, geothermal, and solar resources.</li> </ul>
UNIT 7: FORCES AND MOTION	Why do objects start or stop moving?  What effect does friction, direction, and motion have on speed, velocity, and acceleration in our lives?	<ul> <li>✓ Explain each of Newton's three laws of motion.</li> <li>✓ Explain the concept of inertia.</li> <li>✓ Explain how balanced and unbalanced forces affect an object's motion.</li> <li>✓ Demonstrate and calculate how unbalanced forces change the speed or direction of an object's motion.</li> <li>✓ Describe the relationship between mass, weight, and acceleration.</li> <li>✓ Explain the role of friction and inertia in the world around us.</li> <li>✓ Demonstrate and illustrate the forces that affect motion in everyday life.</li> </ul>

UNIT 8: LIVING SYSTEMS	How are living things organized, based on their different characteristics?	<ul> <li>✓ Explain that all organisms have different characteristics, and these characteristics are used to classify them into the correct domains and kingdoms.</li> <li>✓ Explain the difference between prokaryotic and eukaryotic organisms.</li> <li>✓ Identify the major differences between unicellular and multicellular organisms.</li> <li>✓ Compare and contrast autotrophic and heterotrophic organisms.</li> </ul>
UNIT 9: GENETICS	What role does DNA play in heredity?  How does heredity lead to genetic characteristics?	<ul> <li>✓ Identify the structure and role of DNA.</li> <li>✓ Define heredity.</li> <li>✓ Identify characteristics that are inherited versus those that are not.</li> </ul>
UNIT 10: ECOSYSTEMS	What is the organization of an ecosystem?  How do human activities impact the health of ecosystems?	<ul> <li>✓ Describe biotic and abiotic parts of an ecosystem in which organisms interact.</li> <li>✓ Identify and explain the levels of organization within an ecosystem, including organisms, population, and community.</li> <li>✓ Explain how the health of an ecosystem is directly related to the water quality.</li> <li>✓ Describe how human activities can alter abiotic components of ecosystems.</li> </ul>

# HISTORY

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  EARLY RIVER VALLEY CIVILIZATIONS	How did geography, inventions, government, conflict, and trade impact the River Valley societies?  In what ways did the developments and discoveries of the Early River Valley civilizations impact future cultures?	<ul> <li>✓ Locate and discuss the geographical advantages of the Fertile Crescent.</li> <li>✓ Explain how Mesopotamians developed farming.</li> <li>✓ Describe how the development of writing changed the cultural lives of the Sumerians.</li> <li>✓ Judge how King Hammurabi's code impacted daily life.</li> <li>✓ Assess the success of the Assyrian Army.</li> <li>✓ Relate the Phoenicians' nearness to the Mediterranean to their success as a society.</li> </ul>
UNIT 2: ANCIENT EGYPT	How did geography, inventions, government, religion, and trade impact Egyptian culture?  How did Egypt contribute to STEM advancements?	<ul> <li>✓ Locate and discuss how geography influenced the development of Egypt.</li> <li>✓ Differentiate between the Old, Middle, and New Kingdoms of Egypt.</li> <li>✓ Compare Egyptian beliefs to Biblical truths.</li> <li>✓ Sketch and describe daily life in Egypt.</li> <li>✓ Investigate and explain how the pyramids contributed to math, science, and engineering.</li> </ul>

UNIT 3: ANCIENT INDIA	How did geography, government, and religion shape ancient Indian societies?  What were the impacts of major Indian empires and civilizations?	<ul> <li>✓ Locate and discuss the geography of the Indian subcontinent.</li> <li>✓ Discuss how political structure and government bring changes to a society.</li> <li>✓ Evaluate how the development of Hinduism and Buddhism shaped Indian culture.</li> <li>✓ Research and describe the achievements of ancient Indian civilizations.</li> </ul>
UNIT 4: ANCIENT CHINA	How did geography, government, trade, and religion impact the development of ancient China?  How have the developments of ancient China continued to influence the world today?	<ul> <li>✓ Locate China and identify its geographic features.</li> <li>✓ Describe the role of geography in the development of Chinese societies.</li> <li>✓ List and differentiate between the ancient Chinese dynasties.</li> <li>✓ Determine how developments in each dynasty impacted Chinese society.</li> <li>✓ Examine the effect of Confucianism, Taoism, and Buddhism on Chinese cultures.</li> <li>✓ Locate and conclude the significance of the Silk Road.</li> </ul>

### UNIT 5:

### ANCIENT GREECE

How did geography, government, conflict, trade, and religion impact the development of societies in Greece?

How did the powerful Greek Empire come to an end?

How have ancient Greek cultural, civic, and academic developments influenced the world?

- Explain how the geography of Greece affected the development of trade and the growth of Greek city-states.
- ✓ Illustrate the progression of government in ancient Greece that led to democracy.
- ✓ Describe democracy in ancient Greece.
- ✓ Investigate how religious beliefs shaped Greek society.
- ✓ Assess Greek mythology and religion through a biblical lens.
- ✓ Discuss the role of Alexander the Great in spreading Greek culture beyond Greece.
- ✓ Investigate how the Hellenistic Kingdoms were destroyed.
- ✓ Relate the transition of power from Greece to Rome to the Intertestamental Period in the Bible.
- Determine the impact of Ancient Greece on Western civilization.

### UNIT 6: How did geography, government, conflict, trade, ✓ Locate and analyze how Rome and religion combine to create the Roman used geographic features ANCIENT ROME Empire? to develop and advance its empire. ✓ Compare and contrast Greek How did the powerful Roman Empire come to an and Roman governments. end? Conclude whether government or warfare had a bigger impact on the How has Roman culture influenced the modern development of the Roman Empire. ✓ Discuss the relationship between population, farming, and trade within a society. Identify characteristics of Roman culture. ✓ Critique the Roman Empire and what led to its downfall. ✓ Research and explain how the Roman Empire's government and culture influence our modern world. **UNIT** 7: How did geography, government, religion, ✓ Locate and explain the impact of geography on the cultures and trade contribute to the development of the **CIVILIZATIONS** civilizations of Eastern Europe? of Eastern Europe. **OF EASTERN EUROPE** ✓ Compare and contrast the Byzantine and Roman What were the lasting cultural achievements of Empires. the Byzantine Empire and early Russia? ✓ Compare and contrast Byzantine and Roman Christianity. ✓ Explain how trade connected the Byzantine Empire and early Russia. Describe the impact of Christianity on eastern European art and culture.

### UNIT 8:

MAJOR WORLD **RELIGIONS:** JUDAISM, CHRISTIANITY, AND ISLAM

How did geography, government, trade, and conflict contribute to the spread of Judaism, Christianity, and Islam?

How does religion shape society?

- ✓ Investigate the spread of Judaism, Christianity, and
- ✓ Differentiate between the beliefs of Judaism, Christanity, and Islam.
- Assess the impact of Judaism, Christianity, and Islam on the world today.

# STEM

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: INTRODUCTION TO DESIGN	How can the design process help to problem solve?  How can effective teamwork be more successful than individuals in solving problems?	<ul> <li>✓ Discover the design process while completing an instant design challenge to create an ankle foot orthosis.</li> <li>✓ Learn thumbnail, isometric, and perspective sketching as methods for communicating design ideas effectively without the use of technology.</li> <li>✓ Conduct a mechanical dissection in the lesson project to better understand how objects and parts interact while using sketches to communicate and document findings.</li> </ul>

UNIT 2: SOLID MODELING	What is the purpose of modeling?  How can modeling help in taking designs from 2D to 3D?	<ul> <li>✓ Transfer a two-dimensional representation to a three-dimensional solid model with technology.</li> <li>✓ Learn how to use a computer-aided design (CAD) application to create solid models of various objects and designs.</li> <li>✓ Work in teams and apply the design process to create a puzzle cube.</li> </ul>
UNIT 3: DESIGN CHALLENGE	How can the design process be used to create a therapeutic toy?  How can effective teamwork be more successful than individuals in solving problems?	<ul> <li>✓ Work within teams, to brainstorm and select a design solution to the Therapeutic Toy Design Challenge problem based on design requirements.</li> <li>✓ Establish team norms, collaborate, and recognize that solving authentic problems involves interdisciplinary skills such as engineering and biomedical science.</li> <li>✓ Use the design process to create a solid model of a design, build a prototype for design testing, and make necessary design modifications based on testing results.</li> </ul>

# STEM ROBOTICS

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: INTRODUCTION TO ROBOTICS	What is robotics?	<ul> <li>✓ Investigate how sensors in robots are similar and different from senses in humans and other living things.</li> <li>✓ Understand robots are systems with behaviors controlled by a program. Robots can be programmed to respond to feedback, giving different responses under varying conditions.</li> </ul>
UNIT 2: ROBOTIC PROJECTS	How is the design process used in robotics?	✓ Integrate and reinvest what has been learned in previous lessons to solve problems and physical systems.
UNIT 3: COMPETITIONS	How can sensors and gears improve robot design?	✓ Demonstrate knowledge of sensors, programming, or overall problem solving.
UNIT 4: PROGRAMMING	How does programming logic affect robotic behavior?	✓ Use the programming and building tools to investigate the relationship among wheel circumference, motor rotations and distance measured in centimeters, distance, time, and speed.

## SEVENTH GRADE

Bible

Math

**English** 

Science

History

**STEM** 

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# BIBLE

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: BIBLE BASICS	What are the essentials of the Christian faith?	<ul> <li>✓ Articulate the definitions of worldview and biblical worldview.</li> <li>✓ Display the role of Spiritual Disciplines in the lives of believers.</li> <li>✓ Discuss the person and work of the Holy Trinity and how examining God's nature leads to worship.</li> <li>✓ Define and explore the concepts of sin, salvation, and the Gospel.</li> <li>✓ Explore the authority and authenticity of the Bible.</li> </ul>
UNIT 2: JUDGES, RUTH, SAMUEL	How do Old Testament passages demonstrate the need for a Savior?	<ul> <li>✓ Recognize God's righteous judgment on sin.</li> <li>✓ Distinguish biblical community, as evidenced through Israel's obedience to God and resulting healthy community with one another.</li> <li>✓ Interpret God's work through the Judges, including Deborah, Samson, and Gideon.</li> <li>✓ Discuss God's redemption in the story of Ruth.</li> <li>✓ Identify Samuel's call to be a prophet.</li> </ul>

UNIT 3: THE LIFE AND CHARACTER OF JESUS (LUKE 1-11)	What can be learned about Jesus' life and character through the narrative of Luke?	<ul> <li>✓ Investigate Jesus' humility, as evidenced through His birth and early childhood.</li> <li>✓ Discover the power and purpose of God's fulfilled prophecies concerning Jesus.</li> <li>✓ Analyze Jesus' genealogy through character analysis.</li> <li>✓ Distinguish the complexities of Jesus' disciples.</li> <li>✓ Outline how the Gospel is for everyone.</li> <li>✓ Learn how to implement Jesus' example of prayer in daily life.</li> </ul>
UNIT 4: ADVENT	What can be learned about Jesus through studying the season of Advent?	✓ Discuss the background and message of Advent.

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### **NAVIGATING** CULTURE

How does the message of Scripture conflict with the message of our culture?

### Female students:

- ✓ Apply the truth of Proverbs 31 to cultural issues.
- Dissect the origin of cultural lies.
- Examine commonly held lies about God and how to combat those lies with the truths of Scripture.
- Examine biblical teachings on personal identity struggles, including anxiety, depression, eating disorders, and self-harm in light of God's truth about His beloved children.
- Evaluate Godly principles involving relations with authority figures and fellow sisters and brothers-in-Christ.
- ✓ Discuss the messages sent via the media, and analyze their own media intake.
- Analyze worldly standards of beauty and the pressures those standards impose on today's youth.

### Male students:

- Examine God's instruction and standards for human sexuality through the lens of Ephesians 5:3.
- ✓ Determine how to avoid legalism in fighting against sin.
- Examine justification and sanctification as the best way to deal with sin.
- Illustrate the value of accountability in Christian community.

UNIT 6: THE PASSION OF JESUS (LUKE 19-24)	What can be learned about Jesus' character through His Passion Week?	<ul> <li>Explain the events of Jesus' Passion Week, including the Triumphal Entry, Seder, Crucifixion, and Resurrection.</li> <li>Examine the source of Jesus' authority.</li> <li>Describe how God chooses and uses failures, as demonstrated through Peter's denial and repentance.</li> <li>Debate basic apologetics through presenting alternate resurrection theories and their respective counter-arguments.</li> <li>Analyze various Scripture in response to commonly held questions about heaven.</li> </ul>
UNIT 7: RESPECTABLE SINS	What does God's Word say about culturally permissible sins?	<ul> <li>✓ Articulate the gravity of sin and the necessity of Christ's sacrifice.</li> <li>✓ Demonstrate how to avoid culturally permissible sins, including impatience, anger, lack of self-control, pride, selfishness, discontentment, unthankfulness, judgmentalism, gossip, envy, worldliness, and ungodliness.</li> </ul>

## MATH

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  OPERATIONS WITH NUMBERS	How does the understanding of fractions and decimals relate to rational and irrational numbers?  Why can all numbers be included on a number line?	<ul> <li>✓ Classify real numbers using the terms whole, natural, integer, rational, and irrational and place them on a number line.</li> <li>✓ Write rational numbers as decimals using long division.</li> <li>✓ Perform operations with positive and negative fractions.</li> </ul>
UNIT 2:  OPERATIONS WITH INTEGERS	Why are negative and positive numbers needed in mathematics?  When doing operations with integers, why are different rules needed?	<ul> <li>✓ Add, subtract, multiply, and divide rational numbers, decimals, percents, and integers.</li> <li>✓ Utilize the correct order of operations to solve positive and negative expressions.</li> </ul>
UNIT 3: ALGEBRAIC EXPRESSIONS	How is thinking algebraically different from thinking arithmetically?  Why do properties contribute to algebraic understanding?	<ul> <li>✓ Identify and simplify terms associated with algebraic expressions, while simplifying expressions with more than two terms and combining like terms.</li> <li>✓ Translate verbal descriptions into expressions with more than one variable and parentheses.</li> </ul>
UNIT 4: SOLVING EQUATIONS	How can properties of operations be used to prove equivalence?	<ul> <li>✓ Solve single and multi-step equations with variables on the same side.</li> <li>✓ Solve equations with variables on both sides, parentheses, fractions, and decimals.</li> </ul>

UNIT 5: SOLVING ONE VARIABLE INEQUALITIES	How can an equation or inequality be used to represent a given situation?  How is solving an inequality similar to solving an equation?	<ul> <li>✓ Solve inequalities with single variables and on both sides.</li> <li>✓ Identify when to flip the inequality when solving multi-step inequalities.</li> <li>✓ Solve and plot inequalities using parentheses.</li> </ul>
UNIT 6:  RATIOS AND PROPORTIONS	Why does proportional reasoning increase understanding of the real world?  How can proportional reasoning be used to find unknowns in everyday life?	<ul> <li>✓ Express ratios in simplest form and rates as a unit rate.</li> <li>✓ Determine proportional and nonproportional relationships using tables.</li> <li>✓ Determine and graph the constant of proportionality.</li> <li>✓ Explain the significance of the Golden Ratio.</li> </ul>
UNIT 7: INTRODUCTION TO GRAPHING	Why are spatial relationships used to draw, construct, model, and represent real situations or solve problems?  How can geometric properties be used to describe, model, and analyze situations?	<ul> <li>✓ Understand terminology of coordinate plane, axis, origin, range, domain, ordered pair, relations, and coordinates.</li> <li>✓ Express the range in a table and graph, list domain and range, graph points on a coordinate plane, and name quadrants.</li> </ul>
UNIT 8: LINEAR FUNCTIONS	How are relationships represented mathematically?  Why does the rate of change directly affect the points on a graph?	<ul> <li>✓ Determine whether a relation is a function, solve linear functions, and graph linear functions.</li> <li>✓ Find constant rate of change, slope, and graph equations.</li> </ul>

UNIT 9: EXPONENTS	What are the characteristics of exponential functions?  How are exponential functions used to solve real-world problems?	✓ Use exponential notation, prime factorization, and exponent rules (e.g. product, quotient, power, zero, and negative).
UNIT 10: SCIENTIFIC NOTATION	Why are different forms of numerical data more appropriate to represent the magnitude of numbers?  How can mathematics support effective communication?	<ul> <li>✓ Convert between scientific notation and standard form.</li> <li>✓ Combine like terms using scientific notation: add, subtract, multiply, and divide.</li> </ul>
UNIT 11: GEOMETRY	Why is algebra important in geometry?  How can recognizing repetition or regularity assist in solving problems more efficiently?	<ul> <li>✓ Determine angle relationships, interior angles, and exterior angles.</li> <li>✓ Identify mean, median, mode, and range.</li> </ul>

### **ENGLISH**

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: REPUTATIONS, CLIQUES, AND STEREOTYPES	How do stereotypes divide social classes?  How do societal divisions affect communities?  What responsibility does a Christian have to face prejudice?	<ul> <li>✓ Use reading strategies to monitor comprehension throughout the reading process.</li> <li>✓ Describe the elements of narrative structure including setting, character development, plot, and theme.</li> <li>✓ Describe the impact of word choice, imagery, and literary devices in a text.</li> <li>✓ Identify the main idea of a text.</li> <li>✓ Explain the theme of a text, supported with textual evidence.</li> <li>✓ Establish a central idea and incorporate evidence through multi paragraph compositions.</li> <li>✓ Use a variety of prewriting strategies to generate and organize ideas.</li> <li>✓ Compose a thesis statement.</li> <li>✓ Revise writing for clarity.</li> <li>✓ Write using developmentally appropriate spelling and grammar.</li> </ul>

UNIT 2: CHARACTER AND PERSEVERANCE	How does the natural progression of sin relate to the Holocaust?  How does extreme suffering affect one's perception of the world?  How are Leyson's themes of racism, heroism, suffering, and perseverance still relevant today?	<ul> <li>✓ Identify the main idea of a text.</li> <li>✓ Identify an author's organizational structure.</li> <li>✓ Differentiate between first and third point of view.</li> <li>✓ Identify multiple themes and defend themes with textual evidence.</li> <li>✓ Differentiate between fact and opinion.</li> <li>✓ Identify persuasive techniques.</li> <li>✓ Describe how word choice and language structure convey an author's point of view.</li> <li>✓ Summarize text, identifying supporting details.</li> <li>✓ Organize and synthesize information for use in written format.</li> <li>✓ Use transition words and phrases within and between paragraphs.</li> </ul>
UNIT 3: EMPATHY BOOK CLUBS AND RESEARCH UNIT	How can empathy impact relationships?  What benefit can the writer glean from reading and navigating through informational text?  What is the purpose of research writing on behalf of the writer and reader?	<ul> <li>✓ Collaborate with others to exchange ideas and develop new understandings.</li> <li>✓ Answer research questions and record gathered information using textual support.</li> <li>✓ Collect, organize, and synthesize information from multiple sources.</li> <li>✓ Analyze and evaluate the validity and credibility of resources.</li> <li>✓ Quote, summarize, and paraphrase information from primary and secondary sources with proper citations.</li> <li>✓ Demonstrate ethical use of the Internet.</li> </ul>

#### UNIT 4:

### POETIC EXPRESSION

What distinguishes poetry from other forms of writing?

What role does imagery and figurative language play in poetry?

How can poetry provide a new perspective, understanding, or appreciation for the human experience?

- ✓ Identify elements and characteristics of a variety of genres.
- ✓ Make inferences and draw conclusions using explicit and implied textual evidence.
- ✓ Identify the source and purpose of text.
- ✓ Analyze ideas within and between selections providing textual evidence.
- ✓ Choose the intended audience and purpose.
- ✓ Organize writing structure to fit form or topic.
- ✓ Develop and modify the central idea, tone, and voice to fit the audience and purpose.

### SCIENCE

### **LEARNING GOALS ESSENTIAL** "Students will be able to ..." UNIT 1: Where does life come from, and ✓ Explain the basic needs for all living what evidence do we have for a things. **CHARACTERISTICS** Creator? **OF LIFE** Discuss evidence for God as the designer of all living things. Describe the shared characteristics of all What characteristics do all living things share? living things. ✓ Differentiate between the methods living things use to obtain energy. Describe how organisms maintain homeostasis.

UNIT 2: CELLS	What are the different types of cells?  What is the purpose of photosynthesis and cellular respiration?	<ul> <li>✓ Explain the Cell Theory.</li> <li>✓ Differentiate between prokaryotic and eukaryotic cells.</li> <li>✓ Compare and contrast plant and animal cells.</li> <li>✓ Identify cell structures and functions.</li> <li>✓ Describe the processes of photosynthesis.</li> <li>✓ Summarize the steps to cellular respiration.</li> </ul>
UNIT 3:  MEMBRANE MOVEMENT AND MITOSIS	How do cells move materials through the cell membrane?  What is the process of the cell cycle and mitosis?	<ul> <li>✓ Differentiate between active and passive transport.</li> <li>✓ Describe the effects of hypertonic, isotonic, and hypotonic solutions on cells.</li> <li>✓ Identify the stages of mitosis and the cell cycle.</li> <li>✓ Explain the significance of each stage of mitosis.</li> </ul>
UNIT 4: HEREDITY AND GENETICS	What are genetics and heredity?  How does the process of meiosis  provide for genetic inheritance?	<ul> <li>✓ Make predictions about genetic inheritance using Punnett squares and pedigrees.</li> <li>✓ Distinguish between genetics, heredity, genotype, and phenotype.</li> <li>✓ Describe the structure of DNA.</li> <li>✓ Identify the stages of meiosis and the end result of each stage.</li> </ul>
UNIT 5: THE NERVOUS AND IMMUNE SYSTEMS	What are the major organs and functions of each system?  What role does each system play in maintaining homeostasis?	<ul> <li>✓ Identify the structure and function of the nervous system.</li> <li>✓ Describe the role that the nervous system plays in the body.</li> <li>✓ Identify the structure and function of the immune system.</li> <li>✓ Describe the role that the immune system plays in the body.</li> </ul>

UNIT 6: THE SKELETAL, MUSCULAR, AND INTEGUMENTARY SYSTEM	What are the major organs and functions of each system?  What role does each system play in maintaining homeostasis?	<ul> <li>✓ Identify the structure and function of the skeletal, muscular, and integumentary systems.</li> <li>✓ Describe the role that each system plays in the body.</li> </ul>
UNIT 7: THE CIRCULATORY AND RESPIRATORY SYSTEMS	What are the major organs and functions of each system?  What role does each system play in maintaining homeostasis?	<ul> <li>✓ Identify the structure and function of the circulatory and respiratory systems.</li> <li>✓ Describe the role that each system plays in the body.</li> <li>✓ Trace the sequence of events for the functioning of each system.</li> </ul>
UNIT 8: THE DIGESTIVE AND EXCRETORY SYSTEMS	What are the major organs and functions of each system?  What role does each system play in maintaining homeostasis?	<ul> <li>✓ Identify the structure and function of the digestive and excretory systems.</li> <li>✓ Describe the role each system plays in the body.</li> <li>✓ Trace the sequence of events for the functioning of each system.</li> </ul>
UNIT 9: PLANTS	What are the characteristics shared by all plants?  What are the four major groups of plants?	<ul> <li>✓ Explain the characteristics that all plants share.</li> <li>✓ Identify different types of plants by the category in which they fall.</li> </ul>

### **HISTORY**

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: AFRICA	How did early African civilizations develop?	<ul> <li>✓ Locate geographical features of Africa.</li> <li>✓ Investigate and explain early life in Africa.</li> <li>✓ Compare and contrast West and East Africa.</li> </ul>
UNIT 2: ASIA	How did contact or the lack of contact with other cultures affect the cultures of Asia?	<ul> <li>✓ Locate geographical features of Asia.</li> <li>✓ Differentiate between the five later dynasties of China.</li> <li>✓ Discuss the growth of Buddhism, Confucianism, and Daoism.</li> <li>✓ Create personal Bushidos based on Japanese Samurai.</li> <li>✓ Research and present southwest Asian empires.</li> <li>✓ Discuss the effects of isolationism and cultural diffusion.</li> </ul>
UNIT 3: AMERICAS	How did geography and climate impact the development of American civilizations?	<ul> <li>✓ Locate geographical features of the Americas.</li> <li>✓ Explain the role of geography in the growth and culture of civilizations.</li> <li>✓ Compare and contrast the Maya, Aztec, and Inca civilizations.</li> </ul>

UNIT 4: EUROPE	How did western Europe evolve afte the fall of the Roman Empire?	<ul> <li>✓ Locate geographical features of Europe.</li> <li>✓ Assess the effectiveness of feudalism.</li> <li>✓ Determine the impact of Christianity on medieval Europe.</li> <li>✓ Describe the major medieval kingdoms and wars.</li> </ul>
UNIT 5: RENAISSANCE	What were some of the major contributions of the Renaissance?	<ul> <li>✓ Identify major artists and pieces.</li> <li>✓ Discuss the impact of Renaissance humanism.</li> </ul>
UNIT 6: REFORMATION	How do differing ideas about religion lead to conflict?	<ul> <li>✓ Describe the major ideas, people, and events of the Reformation.</li> <li>✓ Connect the impact of humanism to the Reformation.</li> <li>✓ Examine the effects of the Reformation on ideas about government.</li> </ul>
UNIT 7: SCIENTIFIC REVOLUTION	How did the Scientific Revolution affect Europe and science today?	<ul> <li>✓ Identify the roots of the Scientific Revolution.</li> <li>✓ Describe the impact of major scientists from this period.</li> <li>✓ Connect the effects of the Scientific Revolution to changes in society and government.</li> </ul>
UNIT 8: AGE OF EXPLORATION	How did the cultural contact of the Age of Exploration change the world?	<ul> <li>✓ Explain push and pull factors in the Age of Exploration.</li> <li>✓ Compare and contrast the Old World and New World.</li> <li>✓ Explain new global economic practices.</li> <li>✓ Examine and discuss firsthand accounts from the Middle Passage.</li> </ul>

UNIT 9: WORLD GEOGRAPHY	Where are the most populous countries and their capitals?	<ul> <li>✓ Identify oceans, continents, countries, and capitals.</li> <li>✓ Research and present major capital cities from around the world.</li> </ul>
UNIT 10: ENLIGHTENMENT AND REVOLUTION	How did new ideas lead to major political change?	<ul> <li>✓ Explain the Age of Absolutism and the ideas of the Enlightenment.</li> <li>✓ Predict the results of the Enlightenment.</li> <li>✓ Describe the Age of Revolution in Britain, United States, France, Haiti, and Mexico.</li> </ul>
UNIT 11: WORLD WARS	Why did world wars occur and what were the consequences?	<ul> <li>✓ Explain the causes of World War I and World War II.</li> <li>✓ Identify locations of major countries and events of both wars.</li> <li>✓ Explain why and how the United States got involved in both wars.</li> <li>✓ Compare and contrast the technology and strategies of both wars.</li> <li>✓ Summarize how the Allies were successful in both wars.</li> <li>✓ Describe how the outcome of World War I led to World War II.</li> <li>✓ Examine the Holocaust.</li> <li>✓ Explain the effect so the atomic bomb.</li> </ul>

### STEM ENGENEERING I

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  DESIGN A BRIDGE	How can the engineering design process benefit us in solving daily real-life problems?  How can the design process be used to build the most efficient toothpick bridge?	<ul> <li>✓ Design an efficient Toothpick Bridge using the design process.</li> <li>✓ Use sketching (e.g. thumbnail, isometric, perspective) to communicate design ideas.</li> <li>✓ Use measurement skills.</li> <li>✓ Transfer a two-dimensional representation to a three-dimensional model.</li> <li>✓ Conduct testing and propose design modifications.</li> </ul>
UNIT 2:  DESIGN A MARBLE ROLLER COASTER	How can the knowledge of potential and kinetic energy aid in the construction of a roller coaster?  How can trial and error be used to construct a functional roller coaster?	<ul> <li>✓ Use designated materials to design a         Marble Roller Coaster that runs for a least         five seconds.</li> <li>✓ Conduct testing and propose design         modifications.</li> <li>✓ Test roller coaster to see if a marble will         run for at least five seconds.</li> </ul>
UNIT 3:  DESIGN A MARBLE  MAZE TOY	How can the design process be used to create a marble maze?	<ul> <li>✓ Use sketching to design a maze.</li> <li>✓ Transfer a two-dimensional representation to a three-dimensional model.</li> <li>✓ Conduct testing and propose design modifications.</li> <li>✓ Judge toys based performance and creativity.</li> </ul>

UNIT 4:  DESIGN A CO2 RACE CAR	How can knowledge of aerodynamics be used to design the fastest CO2 car?	<ul> <li>✓ Design the fastest CO2 Race Car using given materials and following given criteria and constraints.</li> <li>✓ Transfer a two-dimensional representation to a three-dimensional model.</li> <li>✓ Use the design process to modify products to improve their appearance, usefulness, and function.</li> <li>✓ Assemble parts to create a functional car.</li> <li>✓ Explain the relationship between weight and speed.</li> <li>✓ Test cars to determine performance on a track.</li> </ul>
UNIT 5:  DESIGN A POPSICLE STICK TOWER	How can the design process be used to build the strongest tower?	<ul> <li>✓ Using designated materials, design a         Popsicle Stick Tower.</li> <li>✓ Test towers to determine which one will         hold the most weight.</li> </ul>

## EIGHTH GRADE

Bible

Math

**English** 

Science

History

STEM

# BIBLE

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: INTRODUCTION TO BIBLICAL WORLDVIEW	What factors lead us to having a Biblical Worldview?	<ul> <li>✓ Participate in a Harkness discussion over the difference in a worldview and a biblical worldview.</li> <li>✓ Explore the dynamics of their generation and how those dynamics integrate with their own Biblical knowledge.</li> <li>✓ Investigate the metanarrative of the entirety of scripture.</li> </ul>
UNIT 2: THE BIRTH OF THE CHURCH (ACTS 1-6)	How does God empower believers?  How do prophecies validate the plan of God?  How does God unify His people in the church?	<ul> <li>✓ Articulate the theme of the Holy Spirit, prophecy, and the Church with accuracy and personal application.</li> <li>✓ Examine the character of Luke and how his life led to documenting the Acts of the Apostles.</li> <li>✓ Dissect the expectation and integrity of the early church.</li> </ul>

UNIT 3: TESTIMONY AND PERSECUTION (ACTS 7-12)	How does God use persecution to accomplish His purposes?  How were individuals in the book of Acts responsible for the spread of the Gospel?	<ul> <li>✓ Explain the themes of persecution and testimony with accuracy and personal application.</li> <li>✓ Investigate the process and journey in which the spread of the Gospel begins.</li> </ul>
UNIT 4: THE SPREAD OF THE GOSPEL (ACTS 13-28)	How do the themes in Acts still impact mankind today?	<ul> <li>✓ Connect the theme of Acts to the way in which the gospel continues to spread amongst the world.</li> <li>✓ Examine how the Gospel is best shared and accepted as well as how Christians are to continue the growth of the kingdom in their current day and time.</li> </ul>
UNIT 5: DO HARD THINGS	How are Christians expected to integrate themselves in culture while actively spreading the Gospel?	<ul> <li>Examine the culture in which they have found themselves, and determine how to negotiate a Biblical worldview in daily application.</li> <li>Discover the best way in which to actively navigate difficult worldly topics using a Biblical worldview.</li> </ul>
UNIT 6: WISDOM LITERATURE: PSALMS, PROVERBS, AND ECCLESIASTES	How can the experiences of wise people in the past influence our thinking today?  How do the realities of a fallen world and the promise of a perfect future world impact the view we have of life?	<ul> <li>✓ Articulate qualities found in the character of David.</li> <li>✓ Investigate the true ability to experience genuine communication with God.</li> <li>✓ Articulate the overarching themes from the books of Psalms, Proverbs, and Ecclesiastes.</li> <li>✓ Dissect the importance of Godly wisdom vs earthly wisdom and how to conquer the wisdom of the Lord.</li> </ul>

UNIT 7: MISSIONARIES AND MARTYRS	How can the faith of missionaries lead to the salvation of many?  What qualities can be found in many of the missionaries who came before us?	<ul> <li>✓ Participate in a Harkness discussion over the film End of the Spear.</li> <li>✓ Investigate the mindset in missionary calling and work.</li> <li>✓ Debate whether or not the mission field is a calling for some or for all believers.</li> </ul>
UNIT 8: PARABLES	Why did Jesus choose to teach in parables?  How can parables be interpreted?	<ul> <li>✓ Evaluate and analyze Biblical parables.</li> <li>✓ The Wheat and the Weeds (Matthew 13:24-43)</li> <li>✓ The Barren Fig Tree (Luke 13:6-9)</li> <li>✓ The Two Sons (Matthew 21:28-32)</li> <li>✓ The Wicked Tenants (Matthew 21:33-46; Mark 12:1-12; Luke 20:9-19)</li> <li>✓ The Wedding Banquet and the Feast (Matthew 22:1-14; Luke 14:15-24)</li> <li>✓ The Unjust Steward (Luke 16:1-13)</li> <li>✓ The Rich Man and Lazarus (Luke 16:19-31)</li> <li>✓ The Net (Matthew 13:47-50)</li> <li>✓ The Ten Bridesmaids (Matthew 25:1-13)</li> <li>✓ The Talents and the Minas (Matthew 25:14-30; Luke 19:11-27)</li> <li>✓ The Sheep and the Goats (Matthew 25:31-46)</li> <li>✓ Examine the purpose behind Jesus' use of parables.</li> <li>✓ Modernize a Biblical parable to show relevance to today's culture and ideology.</li> </ul>

### MATH PRE-ALGEBRA

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: OPERATIONS WITH NUMBERS	What is the purpose of categorizing numbers and using properties of numbers?  Why do numbers continue into infinity?  Why is there a specific order and design when solving math problems?	<ul> <li>✓ Explain categorizing real numbers and utilizing properties of numbers to formulate answers in a more efficient manner.</li> <li>✓ Correlate God's infinite character with numbers continuing into infinity.</li> <li>✓ Apply the order of operations in simplifying expressions to demonstrate God's orderly process to arrive at a common solution.</li> </ul>
UNIT 2:  NUMERIC AND ALGEBRAIC EXPRESSIONS	How can numbers and symbols be used to represent mathematical ideas?	<ul> <li>✓ Determine symbols and numbers to represent mathematical ideas, as well as, solve problems with accuracy.</li> <li>✓ Identify situations in the Bible where number precision is crucial.</li> <li>✓ Determine and interpret appropriate algebraic rules to solve problems in a designated manner.</li> </ul>

UNIT 3:  (ONE-STEP, TWO-STEP, AND MULTI-STEP) EQUATIONS AND INEQUALITIES	How are equations and inequalities used to describe and solve multi-step problems?	<ul> <li>✓ Develop equations and inequalities in a step-based format to solve problems that impact the real world around us.</li> <li>✓ Choose appropriate properties to solve equations and inequalities in order to achieve an exact solution.</li> </ul>
UNIT 4:  RATIOS AND PROPORTIONALITY	How can proportional relationships be identified and represented?  How proportionality be determined from graphs?	<ul> <li>✓ Evaluate proportional relationships, utilizing cross-products, to determine the value of the missing parts of proportional relationships.         Conclude if two ratios are proportional.     </li> <li>✓ Discuss the proportionality of graphs by their visual characteristics.</li> </ul>
UNITS 5: FUNCTIONS AND RELATIONS	What are multiple ways to represent functions?	✓ Develop and represent functions in tables, graphs, ordered pairs, and by mapping.
UNIT 6: GRAPHING LINEAR FUNCTIONS FROM SLOPE-INTERCEPT FORM	What is Slope-Intercept Form, and how is Slope-Intercept Form graphed? How are systems of equations solved?	<ul> <li>✓ Examine the components of Slope-Intercept Form. Choose the appropriate components of Slope-Intercept Form (the y-intercept as well as the slope) to graph a line.</li> <li>✓ Decide and explain the number of solutions to systems of equations by graphing and by solving algebraically.</li> </ul>

UNIT 7:  EXPONENTS AND EXPONENT RULES	Why are numbers represented in different ways, and when is it best to use exponents?	✓ Justify and defend the most appropriate ways to represent numbers.
UNIT 8:  GEOMETRY/ANGLE RELATIONSHIPS	What type of relationships exist between angles and lines?	✓ Evaluate angle measures by identifying the relationships of two parallel lines crossed by a transversal.
UNIT 9: GEOMETRY (AREA AND VOLUME)	How can two-dimensional figures help to solve problems of three-dimensional figures?  How is area different from volume?	<ul> <li>✓ Identify and use the parts of two-dimensional figures to help find the surface area and volume of three-dimensional figures.</li> <li>✓ Distinguish between finding the area of two-dimensional figures and finding the volume of three-dimensional figures.</li> </ul>

### MATH HONORS ALGEBRA I

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  MULTI-STEP EQUATIONS AND INEQUALITIES	Why is there a specific order and design when solving math problems?  How does the process of undoing operations apply to equations?	<ul> <li>✓ Evaluate numeric and algebraic expressions.</li> <li>✓ Translate equations and inequalities.</li> <li>✓ Solve multi-step equations including special solutions.</li> <li>✓ Solve literal equations for a variable.</li> <li>✓ Solve and graph multi-step inequalities.</li> </ul>
UNIT 2: RELATIONS AND FUNCTIONS	How are relations and functions connected?  Why is it helpful to have several representations of the same relation?	<ul> <li>✓ Determine if a relation is a function.</li> <li>✓ Find domain and range given: ordered pairs, tables, maps, graphs.</li> <li>✓ Write and evaluate functions in function notation.</li> <li>✓ Identify zeros and functions graphically and algebraically.</li> </ul>

UNIT 3: LINEAR EQUATIONS	What are key features of a linear function?  How is having different forms to write linear equations useful?	<ul> <li>✓ Graph linear equations in different forms: point-slope, slope-intercept, standard form.</li> <li>✓ Calculate slope given: graphs, equations, two ordered pairs.</li> <li>✓ Find x and y intercepts.</li> </ul>
UNIT 4: WRITING LINEAR EQUATIONS	How can parent functions be identified from a given set of lines?  How are transformation rules for functions described?	<ul> <li>✓ Apply prior knowledge of slope and linear graphs to write linear equations.</li> <li>✓ Explore linear transformations.</li> <li>✓ Write linear equations when given a point and slope or given two points.</li> </ul>
UNIT 5:  DIRECT AND INVERSE VARIATION	How can it be determined if two quantities vary directly or inversely?	<ul> <li>✓ Determine whether a relation represents direct or inverse variation given: ordered pairs, tables, mappings, equations, graphs.</li> <li>✓ Solve for a missing value when given a direct or inverse variation relationship.</li> </ul>
UNIT 6:  SYSTEMS OF LINEAR EQUATIONS AND INEQUALITIES	How is the process of solving inequalities the same or different as solving equations?  How can two inequalities be visually represented, and how are the two inequalities related?	<ul> <li>✓ Recognize the three types of solutions to a system of equations.</li> <li>✓ Solve systems of equations by graphing, substitution, and elimination.</li> <li>✓ Apply systems of equations and inequalities to the real world.</li> <li>✓ Graph and identify solutions to a linear inequality or system of inequalities.</li> </ul>

UNIT 7:  EXPONENTS AND EXPONENTIAL FUNCTIONS	How do linear, quadratic, and exponential functions differ? How are they similar?  How can exponents help measure size extremes in the world?	<ul> <li>✓ Graph and identify the key characteristics of exponential functions.</li> <li>✓ Identify exponential growth and decay from an equation or graph.</li> </ul>
UNIT 8:  POLYNOMIALS AND FACTORING	How do exponent rules help in solving problems?  How can polynomials be simplified and applied to solve problems?  How are the distributive property and the greatest common factor used to factor polynomials?	<ul> <li>✓ Apply exponent rules         to simplify a monomial         expression, including         expressions with negative         exponents.</li> <li>✓ Add, subtract, multiply, and         divide polynomial expressions.</li> <li>✓ Simplify square roots and         cube roots.</li> <li>✓ Factor polynomials.</li> </ul>
UNIT 9:  QUADRATIC EQUATIONS	What is quadratic behavior, and what would be a real-life example?  How can different forms of quadratic functions be used to represent conditions in real-world situations?	<ul> <li>✓ Graph quadratic equations in written, standard, and vertex form.</li> <li>✓ Identify the domain, range, axis of symmetry, vertex, x-intercepts, and y-intercepts, and special solutions.</li> <li>✓ Solve quadratics by factoring, square roots, completing the square, and the quadratic formula.</li> </ul>
UNIT 10: GEOMETRY REVIEW	How can two-dimensional figures be used to solve problems involving three-dimensional figures?  How does a two-dimensional figure differ from a three-dimensional figure?	<ul> <li>✓ Review the Pythagorean theorem and calculate missing legs or hypotenuse.</li> <li>✓ Use two-dimensional and three-dimensional formulas to calculate surface area or missing dimensions.</li> </ul>

### **ENGLISH**

### **ESSENTIAL QUESTIONS LEARNING GOALS** "Students will be able to ..." UNIT 1: How can societal rules help or hurt individuals? ✓ Comprehend and respond to a variety of texts by applying **INTERNAL** a variety of related reading **IDENTITY** strategies. How can society balance individualism with **VERSUS** responsibility to the community? **EXTERNAL** ✓ Make predictions and **PERCEPTION** inferences using textual clues. ✓ Analyze how the author's How do knowledge, memory, and perception development of characters, influence individual points of view? tone, and mood convey meaning. ✓ Analyze the development of themes. Summarize the text, identifying supporting details. ✓ Use context to understand new vocabulary. Participate in student-led discussions. ✓ Use elements of the writing process to compose both creative and analytical text. ✓ Use quotation marks with dialogue and direct quotations. Write using developmentally appropriate conventional spelling and grammar.

### UNIT 2:

### **REFINEMENT** AND REDEMPTION

How are Christians called to address societal and economic disparities?

Do people see others more clearly than they see themselves?

What is necessary for transformation and redemption to take place?

- ✓ Identify an author's organizational structure using textual clues and textual features.
- ✓ Analyze how the author's development of characters, conflict, points of view, and irony convey meaning.
- Compose a thesis statement with a claim and supporting reasons.
- ✓ Collect, organize, and synthesize evidence from multiple sources.
- ✓ Apply correct stylistic citations and formatting.
- Write effective counterclaims.
- Write effective conclusions.
- Use context to understand new vocabulary and use it when reading and writing.
- ✓ Participate in student-led discussions.
- Categorize different verb tenses.
- ✓ Recognize how to correct fragments and run-ons during the writing process.

### UNIT 3:

### FACING ADVERSITY THROUGH ADVOCACY

In what circumstances should Christians be advocates?

How are Shakespeare's views on love, loyalty, friendship, and fate still relevant today?

What is true love? What should one sacrifice for true love? What should one never sacrifice for love?

- ✓ Analyze the author's development of theme, figurative language, and irony to convey meaning.
- Evaluate the credibility of sources.
- ✓ Write arguable research thesis statements.
- Avoid plagiarism by following ethical and legal guidelines for citing information.
- ✓ Incorporate quotes in writing using speaker tags.
- ✓ Write counterclaims to make arguments stronger.
- Use context to understand new vocabulary, and use it when reading and writing.
- ✓ Participate in student-led discussions.
- ✓ Use a variety of sentence structures in writing.
- Correctly use commas in writing.

### **UNIT 4:**

### **BEAUTY IN DIVERSE PERSPECTIVES**

How can life experiences serve as a foundation for creative and expressive writing?

Why are imagery and figurative language important to the understanding and appreciation of poetry?

How does poetry contribute to the understanding of self, others, and the world?

- ✓ Identify and analyze the construction and impact of an author's use of figurative language.
- Compose a variety of poems.
- ✓ Analyze tone, mood, and theme in poetry.
- Examine rhyme scheme as a poetic device.
- ✓ Give organized, formal presentations employing eye contact, speaking rate, volume, enunciation, and natural gestures.
- ✓ Participate in student-led discussions.

## SCIENCE

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1:  SCIENTIFIC METHOD AND MEASUREMENT	How does each step of the scientific method logically relate to the previous step in order to draw a conclusion from a given question?  How is measurement accomplished for scientific experimentation?	<ul> <li>✓ Describe each step of the scientific method.</li> <li>✓ Identify the variables, control, and constants for a given experiment.</li> <li>✓ Explain the purpose for the parts of an experimental design.</li> <li>✓ Measure distance, mass, and liquid volume using the metric system and lab equipment.</li> <li>✓ Convert basic measurements within the metric system.</li> <li>✓ Discuss how God uses measurement to establish order using Biblical references.</li> </ul>
UNIT 2: MAPPING THE EARTH	How do maps show the shape and scale of the Earth?  What are the uses for the various mapping technologies?	<ul> <li>✓ Determine what natural and manmade features are represented by a map.</li> <li>✓ Calculate distance using a map scale.</li> <li>✓ Calculate contour interval and slope, determine direction of stream flow, and find the highest elevation on a given topographic map.</li> <li>✓ Use a latitude and longitude coordinate grid to determine position.</li> <li>✓ Explain how mapping technologies benefit mankind, other living organisms, and climate.</li> </ul>

### UNIT 3: What are plate tectonics, and what evidence ✓ Identify the characteristics of each supports the movement of the tectonic plates? layer of the Earth from inner core THE EARTH'S to crust. **PROCESSES** Explain physical and technological How does heat rising through the mantle layer evidence for plate tectonics. affect the Earth's processes and cause change to Describe how changes to Earth's its surface? surface occur due to heat rising from the core. Relate the movement of the plates at plate boundaries to the features created by the movements. ✓ Using the law of heat equilibrium, explain what happens as heat rises through the layers of the Earth. UNIT 4: How does God provide for mankind through Use the periodic table to determine Earth's resources? the number of subatomic particles, **RESOURCES OF** valence electrons, electron orbitals, THE EARTH and special properties of a given element. How do compounds and mixtures relate to minerals and to the composition of rocks? Draw a Bohr model of a given atom for atomic numbers one to 20. ✓ Relate atoms, elements, compounds, and mixtures to minerals and rocks. Determine the importance of minerals. Identify the type of rock (e.g. igneous, sedimentary, or metamorphic) based on the characteristics of a rock. ✓ Explain how plate tectonics is a driving force for the rock cycle. ✓ Using scriptural references, be able to write how God provides for mankind through the resources He provides.

### UNIT 5: What are the agents of weathering and erosion, ✓ Identify the various forms of and how do they shape the Earth? weathering and erosion. **RESHAPING OF** THE EARTH ✓ Describe the benefits of an alluvial flood and contrast What are the forces that cause rock to change? those benefits with the changes brought by a rain flood. ✓ Identify the processes that How do plate tectonics drive the rock cycle and drive the rock cycle. lead to changes in rock? ✓ Relate plate tectonics to changes seen in rocks. ✓ Explain how a given landform is created through weathering, erosion, and deposition. UNIT 6: ✓ Draw and label bonded water What are the properties that make water a uniquely-created, life-giving substance? molecules, including the THE EARTH'S atoms, their charges, and the WATER bond types. How do plate tectonics create distinct ✓ Identify the properties of environments in the ocean? water and how each property is life-giving. ✓ Create a model of the ocean floor. Why do the tides of the ocean occur, and how do the tides provide for life on Earth while showing ✓ Explain how plate tectonics order in creation? creates the shape and composition of the ocean floor. ✓ Explain how the ocean floor shape leads to distinct environments in the ocean. Relate the position of the sun, moon, and Earth to tides. Evaluate the effect the tides have on Earth and living organisms. ✓ Evaluate the impact of ocean tides on life.

### **UNIT** 7: What are the Earth's major climates? Identify long-term and shortterm climate cycles. **CLIMATE AND** Relate the motions of the Earth **ATMOSPHERE** How is the overall climate affected by the longto climate cycles. term and short-term climate cycles of the Earth? ✓ Describe the characteristics of each layer of the atmosphere. In what ways does God provide protection to life ✓ Explain how God protects life on Earth through each atmospheric layer? on Earth through each layer of the atmosphere. ✓ Describe how plate tectonics How is energy transferred in the atmosphere? affects the composition of the atmosphere. Contrast conduction, convection, and radiation. Explain how energy is transferred from the sun to Earth and within Earth's atmosphere. UNIT 8: How are the laws of motion and gravity seen Name and describe the parts in the motions of Earth and other objects in the of the solar system and their **ASTRONOMY** solar system? motion. AND SPACE ✓ Relate the motion of objects in **EXPLORATION** the solar system to the laws of What are the ways in which mankind can motion and gravity. explore the heavens, and why is this a benefit to ✓ Explain how mankind can mankind? explore space using current technologies. Describe the benefits to mankind How do the heavens declare the glory of God? through space exploration. ✓ Propose a new way that space exploration technology can be used to acquire knowledge about space and acquire new resources. ✓ Design a space colony based on a new way to learn about space. Use scripture to tell why God created the heavens and the Earth.

## **HISTORY**

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: CHARACTER, VALUES, AND BELIEFS	Why is Arkansas unique? Who is America?	<ul> <li>✓ Identify foundations of the character, values, and beliefs of Arkansas through an examination of its geographic regions and populations.</li> <li>✓ Evaluate and describe the character, values, and beliefs of America through an examination of key populations and key historical documents (e.g. Mayflower Compact, Declaration of Independence, Articles of Confederation, Constitution).</li> </ul>
UNIT 2: ECONOMIC DEVELOPMENT AND LEADERSHIP	How have economic factors influenced America?  How have economic factors influenced Arkansas?	<ul> <li>✓ Assess and explain the impact of economic factors on the development of Arkansas and America in the late 15th to mid 20th centuries.</li> <li>✓ Analyze the impact of leadership on the economy of Arkansas and the nation during key historic periods. (e.g. The Colonial Period, The establishment of the new nation, Westward Expansion, The Industrial Revolution, The Gilded Age and Progressive Eras, The Great Depression).</li> </ul>

UNIT 3: CONFLICT AND LEADERSHIP	How has conflict influenced America?  What role has Arkansas played in America's conflicts?	<ul> <li>✓ Evaluate the causes and effects of the major American wars from 1754 to 1945.</li> <li>✓ Investigate and demonstrate the contributions of several key states and national figures related to wars (e.g. French and Indian War, Revolutionary War, War of 1812, Mexican-American War, Civil War, Spanish-American War, World War I, World War II).</li> </ul>
UNIT 4: STRUGGLE FOR EQUALITY	Why is it important to understand Constitutional rights?  How have obstacles to equality been experienced and overcome by Arkansans and Americans?	<ul> <li>✓ Connect biblical principles to issues of equality.</li> <li>✓ Explain past domestic equality challenges.</li> <li>✓ Apply knowledge of Constitutional rights to understand the methods of improving equality in our state and nation.</li> <li>✓ Identify key state and national figures associated with equality challenges and evaluate how they improved American equality.</li> </ul>

## STEM ENGINEERING II

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: DESIGN FOR TOUCH	What is the best design apparatus to assist with moving objects?	<ul> <li>✓ Design an articulated grabber, robotic hand, and a mechanical hand.</li> <li>✓ Conduct a moving objects race.</li> </ul>
UNIT 2: DESIGN FOR FLIGHT	How can we design objects to fly the furthest distance with the best accuracy?	<ul> <li>✓ Design and build a water rocket, pencil glider, and a spinning snake.</li> <li>✓ Conduct flight tests for distance and accuracy.</li> </ul>
UNIT 3: DESIGN TO LAUNCH	How can we design apparatus to launch the furthest distance with the best accuracy?	<ul> <li>✓ Design a rubber band         helicopter, catapults, and         trigger launcher.</li> <li>✓ Launch devices and test for         distance and accuracy.</li> </ul>
UNIT 4: DESIGN TOYS	How can we design and build toys to engage and entertain students?	<ul> <li>✓ Design a hydraulic judo rocket, kinetic sticks, and connect four.</li> <li>✓ Test toys in a single elimination tournament.</li> </ul>

## STEM ROBOTICS

UNIT NUMBER & NAME	ESSENTIAL QUESTIONS	LEARNING GOALS "Students will be able to"
UNIT 1: INVENTION	What is the design process?	<ul> <li>✓ Explain how robots are used to make jobs easier in the workplace and everyday life.</li> <li>✓ Explain the design process.</li> </ul>
UNIT 2: LIFE HACKS	How can robots be designed and built to make life easier?	<ul> <li>✓ Students will create clearly named variables and lists representing different data types, and perform basic math operations on their values.</li> <li>✓ Students will improve their programs to refine a solution, and design projects that combine hardware and software components to collect and exchange data.</li> </ul>
UNIT 3: KICKSTART A BUSINESS	How can robots be used to support our business?	<ul> <li>✓ Students will develop effective problem-solving skills by decomposing problems into smaller parts.</li> <li>✓ Students will use pseudocode as a tool for sequencing actions, use existing code with attributions in order to recognize patterns, systematically identify and fix bugs.</li> <li>✓ Students will use conditions and compound conditions to program encoded devices.</li> </ul>

UNIT 4:  How can robots be designed and built to keep us healthy?  TRAINING TRACKERS	Students will construct, analyze, and/or interpret graphical displays of data to describe the relationships between types of energy (e.g. metabolic, potential, and kinetic) and an object's acceleration.	
		✓ Students will practice finding mathematical relations, and play with statistics and probability to find answers to a scientific question.
UNIT 5: COMPETITION READY	How can robots be built and coded to complete a mission?	✓ Design, build, and code a robot to complete a challenge.

