

Britestar Grade 7 Scope and Sequence

This document outlines the comprehensive curriculum for Britestar Grade 7 courses, including detailed unit breakdowns, learning objectives, and pacing guides for Math 7, English 7, Science 7, and Middle School US History courses.

Math 7 - Course Summary

Math 7 builds on students' foundational math knowledge by introducing new concepts in proportional relationships, rational number operations, expressions and equations, geometry, statistics, and probability. Semester A focuses on numerical and algebraic problem-solving, while Semester B emphasizes spatial reasoning and data analysis. Students will strengthen their ability to apply math in real-world scenarios through problem-solving, visual modeling, and critical thinking exercises.

Semester A Overview

Students begin the year by deepening their understanding of ratios and proportional reasoning, then progress to rational number operations and algebraic expressions. The course concludes with real-world applications of expressions and equations involving rational numbers.

Recommended Pacing

- UNIT 1: RATIOS AND PROPORTIONAL RELATIONSHIPS (DAYS 1–31)
- UNIT 2: RATIONAL NUMBERS (DAYS 32–62)
- UNIT 3: EXPRESSIONS AND EQUATIONS INVOLVING RATIONAL NUMBERS (DAYS 63–90)

Math 7 - Semester A Units

Unit 1: Ratios and Proportional Relationships

Explore proportional relationships using multiple representations and solve real-life ratio and percent problems.

- Compute unit rates associated with ratios of fractions
- Determine if relationships are proportional
- Identify constants of proportionality in tables, graphs, and diagrams
- Represent proportional relationships using equations
- Interpret points on proportional graphs
- Solve ratio and percent problems

Unit 2: Rational Numbers

Operate with rational numbers and apply these skills to real-life mathematical contexts.

- Add, subtract, multiply, and divide rational numbers
- Represent operations on number lines
- Convert rational numbers to decimal form using long division
- Solve real-world problems using all four operations
- Practice fluency with rational number calculations
- Analyze problems that include multiple rational number operations
- Strengthen computational strategies

Unit 3: Expressions and Equations Involving Rational Numbers

Use rational numbers in algebraic expressions and equations to model and solve real-world problems.

- Add, subtract, factor, and expand linear expressions with rational coefficients
- Rewrite expressions in different forms
- Solve problems involving all forms of rational numbers
- Use variables to represent real-world quantities
- Write and solve simple equations
- Write and solve simple inequalities
- Model mathematical situations algebraically
- Investigate multiple solution paths

Math 7 - Semester B Units

Semester B Overview

Semester B builds on the algebraic foundations established in Semester A, focusing on applying mathematical concepts to spatial reasoning, data analysis, and probability. Students will develop skills in geometric problem-solving, statistical inference, and probabilistic modeling.

Recommended Pacing

- UNIT 1: GEOMETRY (DAYS 1–31)
- UNIT 2: STATISTICS (DAYS 32–53)
- UNIT 3: PROBABILITY (DAYS 54–90)

Unit 1: Geometry

Investigate geometric figures, constructions, and formulas for area, volume, and surface area.

- Solve problems involving scale drawings
- Create geometric shapes based on given conditions
- Identify cross sections of 3D objects
- Use area and circumference formulas for circles
- Analyze angle relationships and solve angle equations
- Calculate surface area and volume of geometric solids
- Model real-world situations with geometric reasoning
- Use rulers, protractors, and digital tools

Unit 2: Statistics

Use data from samples to make inferences and compare populations.

- Learn about populations by analyzing random samples
- Make predictions based on sample data
- Compare data distributions and their overlaps
- Use measures of center (mean, median, mode)
- Use measures of variability (range, interquartile range)
- Compare two populations statistically
- Understand bias and sampling methods
- Apply statistics to real-world decision making

Unit 3: Probability

Study probability through theoretical reasoning, simulations, and compound events.

- Define probability on a scale from 0 to 1
- Predict outcomes based on probability and data
- Use simulations to model real-world events
- Compare theoretical probability with experimental results
- Identify discrepancies between expected and actual outcomes
- Use lists, tables, and tree diagrams to find sample spaces
- Determine probabilities of compound events
- Simulate compound events and record outcomes

English 7 - Course Summary

English 7 encourages students to explore fiction, poetry, drama, nonfiction, and novel studies while developing strong skills in writing, research, and communication. In Semester A, students examine change and communication through literature and informational texts. Semester B builds on these skills with a focus on persuasive writing, conflict analysis, identity, and extended novel study.

Semester A Overview

Students begin the year with a study of fiction elements and thematic change. They advance into analyzing nonfiction texts, poetry, and drama, and conclude with strategies for analyzing and presenting informational writing.

Recommended Pacing

- UNIT 1: WHAT CAN WE LEARN FROM CHANGE? (DAYS 1–24)
- UNIT 2: WHEN IS CHANGE BENEFICIAL? (DAYS 25–42)
- UNIT 3: HOW DO WE COMMUNICATE AN IDEA? (DAYS 43–69)
- UNIT 4: HOW DO WE COMMUNICATE WITH AN AUDIENCE? (DAYS 70–90)

English 7 - Semester A Units

Unit 1: What Can We Learn from Change?

Study the theme of change through fiction, examining plot, character, setting, and the writing process.

- Explore the theme of change in literature
- Analyze character types in fiction
- Evaluate how setting influences plot and character
- Study plot structure and development
- Learn the steps in the academic writing process
- Practice planning and drafting written responses
- Develop editing and revising strategies
- Read classic short stories by O. Henry and Poe

Unit 2: When Is Change Beneficial?

Analyze informational texts discussing change in society and personal growth.

- Examine social change in speeches and essays
- Explore personal transformation in nonfiction
- Identify and develop a main idea in writing
- Practice analytical reading of nonfiction
- Develop note-taking and comprehension skills
- Compare historical and modern examples of change
- Use text evidence to support ideas

Unit 3: How Do We Communicate an Idea?

Explore poetry and drama, focusing on how literary devices shape meaning and emotion.

- Analyze literal and figurative language in poetry
- Study sound devices and their effects
- Explore poetic forms and structure
- Learn about the key features of drama
- Compare a dramatic text to its film adaptation
- Read works by Emily Dickinson, Robert Frost, and Chekhov
- Understand how writers communicate emotion and tone

Unit 4: How Do We Communicate with an Audience?

Develop skills for analyzing and creating effective informational texts.

- Explore how tone shifts for different audiences
- Examine the author's purpose in nonfiction texts
- Analyze organizational structures in writing
- Practice presenting ideas clearly and effectively
- Study texts by Mark Twain and Henry Petroski
- Apply rhetorical skills in writing and speaking
- Learn about clarity, coherence, and audience focus

English 7 - Semester B Units

Semester B Overview

Semester B builds persuasive writing and research skills while exploring conflict, identity, and character development in literature and a self-selected novel.

Recommended Pacing

- UNIT 1: WHAT CAN LITERATURE TEACH US ABOUT CONFLICT? (DAYS 1–25)
- UNIT 2: HOW CAN WE POSITIVELY INFLUENCE A CONFLICT? (DAYS 26–44)
- UNIT 3: DOES OUR SEARCH FOR IDENTITY EVER END? (DAYS 45–63)
- UNIT 4: IS IT THE ACHIEVEMENT OR THE JOURNEY THAT DEFINES US? (DAYS 64–90)

Unit 1: What Can Literature Teach Us about Conflict?

Explore literary conflict and perspective, and begin developing persuasive writing skills.

- Analyze point of view in narrative texts
- Examine internal and external conflict in literature
- Study works by Robert Frost, Jack London, and others
- Identify elements of persuasive writing
- Draft a persuasive paragraph or essay
- Explore how conflict drives plot and character development
- Practice responding to texts with text-based evidence
- Build vocabulary around literary analysis

Unit 2: How Can We Positively Influence a Conflict?

Examine how authors and speakers use nonfiction to respond to conflict and influence others.

- Evaluate multiple viewpoints in speeches and letters
- Analyze historical texts about World War II and Japanese internment
- Study persuasive techniques in public speaking
- Deliver a short persuasive speech
- Examine speeches by FDR and Winston Churchill
- Understand how language is used to influence action
- Practice drafting and revising speeches
- Use persuasive appeals effectively
- Connect historical texts to modern issues

Unit 3: Does Our Search for Identity Ever End?

Analyze how literature explores themes of identity, place, and heritage.

- Explore identity in folktales and modern literature
- Analyze how place shapes identity in poetry
- Examine cultural heritage and its influence on self
- Study texts by Sara Teasdale, Julia Alvarez, and others
- Develop research skills for academic writing
- Take organized notes from multiple sources
- Practice writing with clarity and structure
- Reflect on personal identity through reading

Unit 4: Is It the Achievement or the Journey that Defines Us?

Select and analyze a novel, exploring how characters grow and how authors craft meaningful journeys.

- Read and analyze one of three novels:
 - *The Hobbit* by J. R. R. Tolkien
 - *The Old Man and the Sea* by Ernest Hemingway
 - *A Wrinkle in Time* by Madeleine L'Engle
- Identify characters' needs, goals, and growth
- Relate to characters' struggles and achievements
- Study plot structure across a full-length novel
- Examine how the author conveys meaning through character arc
- Organize and cite sources accurately

MS Earth & Space Science - Course Summary

This course explores Earth's systems, the geosphere, weather, planetary science, and the universe. Semester A builds foundational skills in science and focuses on Earth's surface and internal processes. Semester B extends to climate, natural resources, astronomy, and space exploration.

Semester A Overview

Semester A introduces scientific methods and investigates Earth's surface, internal structures, and how they change over time. Students study Earth materials, plate tectonics, and geological history.

Recommended Pacing

- UNIT 1: SCIENCE AND ENGINEERING (DAYS 1–15)
- UNIT 2: TOOLS OF INQUIRY (DAYS 16–28)
- UNIT 3: PLANET EARTH (DAYS 29–42)
- UNIT 4: THE GEOSPHERE (DAYS 43–56)
- UNIT 5: OUR CHANGING PLANET (DAYS 57–71)
- UNIT 6: EARTH'S PLATES (DAYS 72–90)

MS Earth & Space Science - Semester A Units

Unit 1: Science And Engineering

- Students explore what science is and how engineering design is applied.
- Define science and the nature of scientific inquiry
- Distinguish between scientific laws and theories
- Understand types of scientific investigations
- Explore how engineers solve real-world problems
- Use the engineering design process

Unit 2: Tools Of Inquiry

This unit introduces modeling, measuring, and interpreting scientific data.

- Understand scientific models and their purposes
- Learn to select appropriate tools for measurement
- Use SI units to collect and record data
- Display and interpret data in tables and graphs
- Practice measurement accuracy and data analysis
- Apply modeling to real-world observations

Unit 5: Our Changing Planet

Students investigate Earth's dynamic processes and geologic time.

- Study crustal deformation processes (faults, folds, uplift)
- Explore weathering and erosion forces
- Understand how fossils form and what they reveal
- Use timelines and fossil evidence to understand geologic time

Unit 3: Planet Earth

Students explore maps, Earth's structure, and the cycling of materials.

- Interpret models of Earth (globes, maps, cross-sections)
- Identify major components of Earth's structure
- Understand Earth's spheres: geosphere, hydrosphere, etc.
- Study Earth's natural cycles (e.g., carbon, rock cycle)
- Practice using geologic models and diagrams

Unit 4: The Geosphere

This unit explores Earth's solid components: rocks, minerals, and soil.

- Learn how minerals form and how to identify them
- Understand how rocks form and change through the rock cycle
- Study soil composition and formation
- Explore real-world uses of Earth materials
- Identify crystal structures and rock types in lab work
- Practice analysis of mineral/soil characteristics

Unit 6: Earth's Plates

This unit focuses on plate tectonics, earthquakes, and volcanoes.

- Learn how Earth's tectonic plates interact
- Explore plate boundaries, earthquakes, and volcanic activity
- Understand causes of seismic activity and eruptions
- Practice interpreting data from fault lines and hotspots

MS Earth & Space Science - Semester B Units

Semester B Overview

Semester B investigates Earth's atmosphere and water systems, how weather and climate form, human impact on the planet, and the structure of the solar system and universe.

Recommended Pacing

- UNIT 1: THE ATMOSPHERE, HYDROSPHERE, AND CRYOSPHERE (DAYS 1–18)
- UNIT 2: WEATHER AND CLIMATE (DAYS 19–36)
- UNIT 3: HUMANS AND EARTH'S RESOURCES (DAYS 37–54)
- UNIT 4: THE SOLAR SYSTEM (DAYS 55–72)
- UNIT 5: EXPLORING THE UNIVERSE (DAYS 73–90)

Unit 1: The Atmosphere, Hydrosphere, and Cryosphere

Students explore water, ice, ocean, and atmosphere systems.

- Study freshwater systems and the cryosphere
- Learn how ocean currents and floor structures influence Earth
- Analyze properties and structure of the atmosphere
- Practice identifying interactions between systems

UNIT 3: Humans And Earth's Resources

Students examine human use of natural resources and environmental impact.

- Identify renewable and nonrenewable natural resources
- Study human impact on water and ecosystems
- Conduct a lab on water quality and pollution reduction
- Compare energy resources and their sustainability
- Explore effects of population growth and per-capita use

Unit 5: Exploring The Universe

Students learn about the universe, stars, and space technology.

- Study the Big Bang and the structure of the universe
- Explore star life cycles and the structure of our Sun
- Use models to interpret stellar evolution
- Investigate the history and future of space exploration

Unit 2: Weather and Climate

This unit explores weather phenomena and global climate zones.

- Define weather and its causes
- Investigate atmospheric pressure, wind, and humidity
- Explore severe weather types and safety
- Conduct lab experiments on wind and humidity
- Compare global climates and geographic patterns

Unit 4: The Solar System

This unit covers the structure and components of the solar system.

- Explore the Sun-Earth-Moon system and cycles (seasons, tides)
- Build a 3D model of the system (optional lab)
- Learn about planets, comets, asteroids, and moons
- Compare inner and outer planets
- Practice solar system vocabulary

MS U.S. History - Course Summary

This course traces the development of the United States from its earliest peoples through the Civil War and Reconstruction. Semester A explores the founding of the country, the formation of the federal government, and westward expansion. Semester B continues with industrial growth, reform movements, regional tensions, and the Civil War's impact.

Semester A Overview

Semester A introduces the foundations of U.S. history, including early colonization, the American Revolution, and the creation of the U.S. Constitution and early government.

Recommended Pacing

- UNIT 1: INTRODUCTION TO U.S. HISTORY (DAYS 1-22)
- UNIT 2: FROM COLONIES TO INDEPENDENCE (DAYS 23-40)
- UNIT 3: BUILDING THE FEDERAL GOVERNMENT (DAYS 41-62)
- UNIT 4: EARLY U.S. GOVERNMENTS (DAYS 63-90)

MS U.S. History - Semester A Units

Unit 1: Introduction to U.S. History

Students develop foundational historical thinking skills and study Indigenous cultures.

- Analyze primary and secondary sources
- Evaluate historical evidence for credibility and bias
- Practice understanding historical context and argumentation
- Study the First Peoples of North America
- Explore effects of European colonization
- Investigate the Atlantic slave trade and Indigenous displacement
- Analyze colonization's long-term consequences

Unit 2: From Colonies to Independence

This unit covers life in the colonies, British rule, and the American Revolution.

- Study regional differences among New England, Middle, and Southern Colonies
- Explore daily life, economy, and early American culture
- Learn about Enlightenment ideas and the path to revolution
- Examine the Declaration of Independence
- Understand major events and battles of the Revolutionary War

Unit 3: Building The Federal Government

Students examine the nation's early constitutional development.

- Analyze strengths and weaknesses of the Articles of Confederation
- Study the Constitutional Convention and major compromises
- Explore the structure of the U.S. Constitution
- Read and reflect on the system of checks and balances
- Understand the ratification debate and Bill of Rights
- Analyze free speech and its role in a democratic society

Unit 4: Early U.S. Governments

This unit explores early presidencies, policy changes, and Indian removal.

- Study the Federalist Era and key Supreme Court rulings
- Examine the Jefferson and Madison administrations
- Understand the causes and effects of westward expansion
- Analyze the Monroe Doctrine and Jacksonian democracy
- Explore the Indian Removal Act and its consequences

MS U.S. History - Semester B Units

Semester B Overview

Semester B explores cultural and economic changes in the 1800s, the rise of reform movements, sectional conflict, and the Civil War and its aftermath.

Recommended Pacing

- UNIT 1: EARLY U.S. CULTURE AND EXPANSION (DAYS 1–22)
- UNIT 2: INDUSTRIALIZATION AND REFORM (DAYS 23–40)
- UNIT 3: REGIONAL CONFLICTS (DAYS 41–62)
- UNIT 4: THE CIVIL WAR AND RECONSTRUCTION (DAYS 63–90)

Unit 1: Early U.S. Culture And Expansion

Students explore how geography and cultural values shaped early 19th-century America.

- Practice geographic reasoning and map analysis
- Examine U.S. geography and its impact on settlement
- Analyze early American culture and values
- Explore African American life before the Civil War
- Study the rise of the early American economy
- Learn about westward expansion and its effects
- Reflect on railroads and migration in journal activities

Unit 2: Industrialization And Reform

This unit focuses on industrial growth, immigration, and major reform movements.

- Study effects of the Industrial Revolution on workers and cities
- Explore immigration waves and urbanization patterns
- Examine 19th-century cultural and religious developments
- Study the abolition movement and Underground Railroad
- Learn about early women's rights efforts and Seneca Falls

Unit 3: Regional Conflicts

Students examine regional divisions over slavery and expansion.

- Study economic differences between North, South, and West
- Analyze Missouri Compromise, Compromise of 1850, and Kansas-Nebraska Act
- Understand sectional tensions between free and slave states
- Explore the Mexican-American War and its consequences
- Study territorial changes after the Treaty of Guadalupe Hidalgo

Unit 4: The Civil War and Reconstruction

This unit explores causes of the Civil War, major battles, and Reconstruction efforts.

- Study secession and early events leading to war
- Examine major Civil War battles and the Emancipation Proclamation
- Read and reflect on the Gettysburg Address
- Explore Union strategies and the role of key leaders
- Analyze Reconstruction plans and African American civil rights
- Study the end of Reconstruction and rollback of freedoms