

## ENGLISH LANGUAGE ARTS

### Reading:

#### Key Ideas and Details:

- Cite strong and thorough textual evidence
- Provide a summary distinct from personal opinions or judgements
- Describe how a plot unfolds in a series of episodes

#### Craft and Structure:

- Determine the meaning of words
- Explain how an author develops the point of view

#### Integration:

- Compare and contrast one author's presentation of events with another ( memoir and biography)
- Integrate information presented in different media or formats

### Language:

- Demonstrate command of the conventions of standard English grammar and punctuation
- Use knowledge of language and its conventions when writing, speaking, reading, or listening
- Demonstrate understanding of figurative language, word relationships, and nuances in word meanings

### Writing:

- Write arguments to support claims with clear reasons and relevant evidence
- Write informative texts to examine a topic and convey information
- Produce clear and coherent writing
- Develop and strengthen writing by planning, revising, editing, rewriting, or trying a new approach
- Conduct short research projects to answer a question drawing on several sources
- Gather relevant information from multiple sources

### Speaking and Listening:

- Engage in a range of collaborative discussions

- Present claims and findings sequencing ideas logically and use pertinent descriptions

## MATHEMATICS

- Understand ratio concepts and use ratio reasoning to solve problems
- Apply and extend previous understanding of multiplication and division to divide fractions by fractions
- Apply and extend previous understandings of numbers to the system of rational numbers
- Apply and extend previous understandings of arithmetic to algebra

### Mathematical Practices:

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision
- Look for and make use of structure
- Look for and express regularity in repeated Reasoning

## SCIENCE AND TECHNOLOGY

### Earth and Space:

- Develop and use a model of the Earth-Sun-Moon system to explain the causes of lunar phases, and eclipses of the sun and moon
- Analyze and interpret rock layers and index fossils to determine the relative ages of rock formations
- Graphically display that Earth and its solar system are part of the Milky Way
- Analyze and interpret maps showing the distribution of fossils and rocks, continental shapes and seafloor structures

### Life Science:

- Provide evidence that organisms are made of cells

- Develop and use a model to describe the ways parts of cells contribute to essential cellular functions
- Construct an evidence-based argument that body systems interact to carry out essential functions of life
- Analyze and interpret evidence from the fossil record to describe organisms and their environment
- Argue using anatomical structures to support evolutionary relationships among/between fossils and modern organisms

### Physical Science:

- Plan and conduct an experiment with exothermic and endothermic chemical reactions to measure and describe release or absorption of thermal energy
- Use a particulate model to show that density is the amount of matter in a given volume
- Conduct an experiment to show that many materials are mixtures of pure substances that can be separated physically into their component pure substances
- Use evidence to explain that gravitational forces between objects are attractive and noticeable only when one or both have a very large mass
- Model a simple wave to explain that it has a repeating pattern with a specific amplitude, frequency & wavelength; and the amplitude of a wave is related to the energy of the wave
- Use diagrams/models to explain how light rays/mechanical waves are reflected, absorbed or transmitted through various materials
- Present qualitative data to support that digitized signals can be used to encode and transmit information

### Technology and Engineering:

- Design criteria and constraints of a design problem to ensure a successful solution
- Create visual representations of solutions to a design problem using scale and proportion
- Communicate a design solution to an intended

- user
- Analyze and compare properties of metals, plastics, wood and ceramics including flexibility, ductility, hardness, thermal conductivity and melting point
- Given a design task, select appropriate materials needed in the construction of a solution
- Choose and safely use appropriate tools to construct a prototype

## SOCIAL STUDIES

### Human Origins, Neolithic, Paleolithic Eras

- Describe the environmental changes that shaped Earth
- Identify sites where origins of first humans were found
- Explain Paleolithic and Neolithic
- Explain how agriculture differed between the complex societies
- Explain how complex societies spread
- Construct a timeline of the Paleolithic and Neolithic Era

### Western Asia, the Middle East and North Africa

- Locate physical features of North Africa, Middle East, and western Asia
- Distinguish between countries and capitals
- Explain influences of settlement patterns
- Analyze and describe early Mesopotamia and Ancient Egypt
- Locate upper and lower Egypt and ancient Nubia and describe the significance of the Nile River
- Describe social classes, religion, and achievements of Ancient Egypt
- Locate Greece, Asia Minor, Crete, Phoenicia, the Aegean and Red Sea
- Explain Phoenician Significance
- Locate kingdoms of the Hittites and ancient Israel and Palestine and ancient Egypt
- Describe ancient Israel history and trace migrations of Israelite tribes
- Locate the Arabian Peninsula, identify the Red Sea and cities of Mecca and Medina
- Describe the life and teachings of Muhammad
- Explain Islam's relationship with Christianity and Judaism
- Research contributions of one the ancient societies to the modern world

- Describe impact through trade, cultural exchange, and conquest among the societies and empires in the region

### Studying Complex Societies

- Explain how different fields in social studies focus on different means of studying society past and present
- Give ways a current historical interpretation could influence differences on past events
- Give example of how archaeologists, historians, etc. work as a team to analyze evidence

### Sub-Saharan Africa

- Locate Africa, the Atlantic Ocean, Indian Ocean, and the Mediterranean Sea
- Locate countries, capitals, and cities and describe their absolute location
- Identify and explain significance of Kingdom of Axum
- Explain the role of the Swahili coastal societies
- Identify sources of wealth and importance of West African cities and empires
- Explain role of trans-Saharan trade

### Central America, Caribbean Islands, and South America

- Locate Central America, Caribbean sea, and important physical features of the region
- Locate South America and its surrounding oceans
- Explain factors that influenced settlement patterns
- Describe the culture of the native peoples of the region
- Research and report one of the major ancient societies that existed in Central America

**The purpose of this guide is to identify the major topics, concepts, and skills that are considered essential for this grade level as identified by the Massachusetts Curriculum Frameworks.**

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# CURRICULUM GUIDE GRADE 6



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