

WORLD BOOK

Typical Course of Study: Grade 9

LANGUAGE ARTS

Reading Literature and Informational Text and Literacy in History/Social Studies, Science, and Technical Subjects

- Cite evidence from text to support analysis of both explicit and implicit messages within the text
- Cite evidence from text to support analysis of primary and secondary sources
- Identify the theme or central idea of a text and analyze its development
- Identify in detail a series of events described and the relationships among them
- Identify key steps in a text's description of a process related to history or social studies
- Summarize literary and informational or explanatory texts
- Follow a multistep written procedure when performing science or technical tasks
- Compare and contrast treatments of the same topic in several sources
- Analyze how characters develop and how this advances the theme or plot
- Analyze how a text unfolds a series of events and the connections among them
- Determine meanings and effects of words, phrases, or symbols as used in a text
- Analyze how the author's structural choices, order of events, and use of time create specific effects, such as tension or surprise
- Analyze a particular point of view or experience reflected in a work of world literature
- Analyze how an author transforms source material from an earlier work by a previous author
- Determine author's purpose or point of view and how rhetoric is used to advance that purpose or point of view
- Integrate quantitative or technical information presented in text form with information expressed visually
- Explain how visual and multimedia elements help to contribute to the meaning or tone of a text
- Compare the point of view or claims of two or more authors on similar topics
- Identify and evaluate the argument, reasoning, and evidence in a text
- Analyze and compare various accounts of a subject told in different media
- Analyze significant U.S. (or home country) historical and literary documents
- By the end of the academic year, read and understand grade-level literary and informational texts (including history/social studies, science, and technical subjects) independently and with proficiency

Speaking and Listening

- Participate in collaborative discussions on a variety of grade-level topics
- Express ideas clearly and respectfully in group discussions
- Follow agreed-upon rules and preparation procedures for discussions
- Ask questions and respond to others, building on others' ideas

- Integrate into speech preparation diverse sources of information in a variety of formats
- Evaluate a speaker's point of view, reasoning, and use of rhetoric and evidence
- Identify an argument, claims; evaluate the soundness of reasoning and evidence
- Present claims or information in logical sequence supported with relevant facts and details
- Use clear pronunciation and appropriate eye contact and volume when speaking
- Add multimedia and visual components to clarify ideas in presentations
- Adapt speech to a variety of tasks, showing command of formal English

Writing

- Write arguments supported with clear reasons and relevant evidence, including arguments in history, social studies, science, and technical topics
- Write informative or explanatory pieces developed with relevant details, including arguments in history, social studies, science, and technical topics
- Write narrations that include details, put events in order, and provide a conclusion
- Produce writing appropriate to the task, purpose, and audience
- Strengthen writing by getting feedback, revising, editing, and rewriting
- Add dialogue and descriptions to develop characters and events
- Use technology, including the Internet, to produce and publish writing
- Contribute to collaborative group writing projects
- Conduct short and sustained research projects on a topic through investigation
- Draw and cite evidence from a variety of texts to support analysis
- Assess the credibility and accuracy of sources
- Quote or paraphrase data and conclusions while avoiding plagiarism
- Include evidence from literary or informational texts to support analysis
- Regularly produce clear writing for a variety of tasks, purposes, and audiences (including writing in history/social studies, science, and technical subjects)

English Language Skills

- Show a command of conventions of standard English grammar and usage when writing or speaking
- Correctly use conventions of English when writing (*capitalization, punctuation, and spelling*)
- Make effective choices of language for meaning and style when writing or speaking
- Know the difference between formal and informal English and when to use each

Vocabulary

- Use context clues to determine word and phrase meanings
- Use word structure clues to determine meanings of unknown words
- Use relationships between words to better understand each word's meaning
- Use references (print and digital) to determine or verify a word's meanings, or to find its pronunciation or part of speech
- Interpret and use figurative language in context
- Distinguish shades of meaning among related words
- Distinguish among connotations of words with similar denotations
- Learn and use grade-level general academic vocabulary

MATHEMATICS

Algebra I

- Rational and irrational numbers
- Quantitative reasoning
- Real numbers and the real number line
- Operations with real numbers
- The distributive property
- Exponents and powers, including rational, zero, and negative exponents
- Scientific notations
- Parts and structure of expressions
- Interpreting and simplifying expressions, including radical expressions
- Rewriting expressions in equivalent forms to solve problems
- Rewriting rational expressions
- Arithmetic operations on polynomials
- Polynomial identities
- Reading and writing equations
- Solving equations as a process of reasoning
- Steps in solving equations
- Equations and inequalities with one variable
- Using equations to solve problems
- Interpreting and modeling solutions
- Rearranging formulas
- Equations with two variables
- Linear equations in various forms
- Quadratic equations
- Systems of equations
- Explaining the coordinate graph
- Graphing coordinates and scatter plots
- Interpreting linear graphs
- Graphing linear equations
- Graphing solutions to linear inequalities
- Predicting with linear models
- Graphing systems of equations
- Slope of a line
- Using graphs to solve problems
- Pythagorean Theorem and its converse
- Reading, writing, and explaining functions
- Graphing functions
- Inverse functions

SCIENCE

Life Science

- Origins of life
- Growth and development of organisms
- Ecological relationships
- Cycles of matter and energy flow in organisms and systems
- Plant structures and functions

- Plant processes (*photosynthesis, respiration, and transpiration*)
- Plant behaviors
- Animal structures and functions
- Animal behaviors, including social and group behavior
- Cell structure and function
- One-cell and multicellular organisms
- Cell physiology
- Cell chemistry
- Diffusion and osmosis
- Mitosis
- Interdependent relationships in ecosystems
- Ecosystem dynamics, functioning, and resilience
- Cycles of matter and energy transfer in organisms in ecosystems
- Solar energy in ecosystems
- Human interactions with the environment
- Biodiversity and humans
- Environmental problems and solutions
- Human body structure, function, and systems
- Homeostasis and feedback systems
- Immune responses
- Human reproduction and development
- Genetics
- Natural selection and adaptation
- Biotechnology and bioethics

HEALTH AND SAFETY

- Gaining, analyzing, and applying health information
- Knowledge about and use of available health services
- Health choices and long-term consequences of choices
- Benefits of, practices for, and personal responsibility for health
- Personal health profile and plan
- Interrelationships of physical, mental, and social health
- Influences of social pressures on physical, emotional, and social health
- Marketing and advertising effects on health behavior
- Structure, functions, and interdependence of major body systems
- Causes and effects of poor body image
- Eating disorders and their prevention and treatment
- Changes in anatomy during puberty
- Role of hormones in growth, development, and personal health
- Reproductive processes; healthy development of fetus
- Consequences of sexual activity
- Strategies to resist pressures to become sexually active
- Characteristics of healthy relationships and dating behaviors
- Lifelong strategies for identifying and preventing depression and anxiety
- Myths and facts related to disease transmission and prevention
- Laws relating to tobacco, alcohol, drugs, and other controlled substances
- Treatment options for drug and other addictions
- Basic safety rules for daily and recreational activities
- Understanding of first-aid procedures and emergency response

- Use, abuse, and effects of medications, tobacco, alcohol, and other controlled substances
- Relationship between tobacco, alcohol, or illegal drugs and such unsafe situations as date rape, sexually-transmitted disease, and drinking and driving
- Preventing the use of tobacco, alcohol, and illegal drugs
- Prevention of and response to deliberate and accidental injuries
- Reasons and ways to avoid violence, gangs, weapons, and illegal drugs
- Skills to identify, avoid, report, and cope with potentially dangerous situations
- Positive and negative characteristics of social groups, gangs, clubs, cliques
- Development of self-confidence, self-esteem, and self-control
- Understand appropriate ways to express emotions
- Positive social interactions with peers, in home, and in the community
- Bullying, alternative behaviors to bullying, and appropriate responses to bullying
- Strategies for resolving conflicts with peers and others
- Getting personal support from family
- Relationship between tobacco, alcohol, and drugs and unsafe situations

SOCIAL SCIENCE

Global Studies

- Use and creation of various kinds of maps
- Identifying physical and human characteristics of a place
- Major world regions
- Physical and cultural characteristics of United States and Canada
- Physical and cultural characteristics of Latin America
- Physical and cultural characteristics of Europe and Russia
- Physical and cultural characteristics of Southwest Asia
- Physical and cultural characteristics of North Africa
- Physical and cultural characteristics of Sub-Saharan Africa
- Physical and cultural characteristics of East Asia and Southeast Asia
- Physical and cultural characteristics of Australia and Oceania
- Distributions of human populations in each world region
- Patterns of migration and settlement in each world region
- How physical geography affects human activity in each world region
- Adaptations of people to their environments in each world region
- Independence and nationalist movements in Sub-Saharan Africa and Asia
- 20th century nationalist movements in Southwest Asia and North Africa
- Patterns of industrialization and trade in the Western hemisphere
- Revolutions, independence movements, and social changes during the Cold War
- The spread of capitalism since the end of the Cold War
- Role of Europe in today's economy
- Influence of oil and resource distributions on economies of regions
- Changes in the economy of contemporary China
- Persistent economic and social disparities in world regions
- Persistent cultural conflicts in world regions
- Varieties of religious beliefs in the contemporary world
- Human rights issues around the world
- Other key global issues
- Influence of social media, TV, and the Internet on social and political movements

- Features of increasing globalization
- Revival and maintenance of traditional cultures in the face of globalization
- Purpose, roles, and work of some key international organizations
- Examples of global interdependence and cooperation

ARTS

Note about high school arts curriculum: *High school curriculum generally requires some sort of study and credit in the arts. Most schools offer experiences and study in a variety of areas in the arts. Some examples are:*

- Animation
- Architecture
- Casting
- Ceramics
- Choral music
- Computer graphics and applications
- Construction
- Dance or other creative movement
- Digital arts
- Drama (including mime, storytelling, and technical aspects of theater)
- Drawing
- Film
- Graphic design
- Improvisational music
- Instrumental music
- Jewelry-making
- Metal Sculpture
- Mosaics
- Painting
- Photography
- Printmaking
- Sculpture
- Textiles and fiber art

In the study and practice of any of the performance or visual arts, students encounter such topics and sharpen such skills as:

- Watching, listening, and responding to works of art
- Background and elements of particular art form
- Understanding of the processes and techniques of particular forms
- Principles of design
- Vocabulary of particular art forms
- Interpretation, analysis, and evaluation of works of art
- Reflecting on own experiences and creations or performances
- Art history
- Well-known artists and works of visual or performing art forms
- Cultural contexts and expressions of art
- Style, materials, and techniques used in a work of art
- Generating questions about a work of art
- Considering messages and purposes of a particular work of art
- Responding orally, in writing, or some other way to works of art

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- Reflecting on the contributions of artists to society
- Careers in art
- Discipline and mindset for improving and developing skills in art
- Fostering of creativity and self-expression
- Development of artistic awareness, imagination, perception, skill
- Experimenting with a variety of media, forms, and techniques
- Solving design problems
- Use of digital media and tools for producing, viewing, or responding to art
- Polishing and furthering personal skills in a chosen area of art
- Participation in collaborative discussions about works of art
- Participation in collaborative creation of works of art
- Proper safety procedures for activities in the specific arts

TECHNOLOGY

General goal for high school students: Use technology **within all content areas** to collaborate, communicate, generate innovative ideas, create original works, and investigate and solve problems.

- Demonstrating proficient keyboarding skills
- Understanding of operating system tools, applications, and storage devices
- Use of a variety of common applications and productivity tools
- Creating products combining text, images, sound, music, and video
- Creating and publishing stories, games, animations, problems, and solutions
- Creating Web pages
- Use of spreadsheet and concept-mapping software
- Use of interactive tools to design polls or surveys to gather data
- Making contributions to blogs, wikis, and other digital collaborative forums
- Use of online databases or simulation software to interpret and predict trends
- Increasing knowledge about many cultures through digital content
- Communicating with multiple audiences through a variety of formats and media
- Increasing understanding of a local or global issue
- Researching and using information fluently
- Choosing appropriate search engines, directories, and online applications
- Selecting appropriate, relevant sources for a purpose or audience
- Analysis and synthesis of information to make decisions or develop solutions
- Assessing the credibility and validity of online sources
- Use of bibliography tools to cite sources from digital sources
- Reporting and sharing results or solutions
- Exploring ways to receive feedback from multiple, appropriate audiences
- Demonstrate understanding and avoidance of potential online dangers
- Understanding health hazards of frequent technology use
- Demonstrating safe and legal use of online sites and information
- Use of passwords, virus prevention, and other protective procedures
- Understanding risks of social networking sites; safe sharing of personal information online
- Understanding privacy issues and how data are kept and available publicly
- Practicing ethical and respectful behavior online
- Careful, responsible use and maintenance of digital equipment
- Demonstrating openness to learning new technologies and procedures

