9th Grade LANGUAGE ARTS

Ninth grade students study sentence types, sentence problems, sentence interruptions, sentence divisions, and sentence ends. They study newspapers, the internet, and persuasion pieces. Students learn about imagery, symbolism, irony, ambiguity, conflict, and subtlety. They study using rhetoric, the structure of an argument, writing descriptions, writing about people, places, and events, creating a timeline, gathering facts, and making it personal. Ninth grade students continue to learn the proper usage of the types of nouns, verb tenses, forms of adjectives, problems with pronouns, functions of adverbs, and rules with prepositions.

E901
Chapter 1: Sentences
Section 1: Subjects and Predicates
Section 2: Sentence Types
Section 3: Complements
Section 4: Sentence Problems
Chapter 2: Phrases and Clauses
Section 1: Adjective Clauses
Section 2: Adverb Clauses
Section 3: Verb Phrases and Prepositional Phrases
Section 4: Verbal Phrases and Appositive Phrases
Chapter 3: Punctuation
Section 1: Sentence Ends
Section 2: Sentence Divisions
Section 3: Sentence Interruptions
Section 4: Other Punctuation
E902
Literature
E903
Chapter 1: Public Documents
Section 1: Newspapers
Section 2: Persuasion Pieces
Section 3: The Internet
Chapter 2: Literary Devices
Section 1: Figurative Language
Section 2: Imagery
Section 3: Symbolism
Section 4: Allegory
Chapter 3: Elements of Fiction
Section 1: Irony
Section 2: Ambiguity
Section 3: Conflict
Section 4: Subtlety
E904
Literature
E905
Chapter 1: Research
Section 1: Exposition and Persuasion
Section 2: Narrowing the Topic
Section 3: Choosing a Thesis
Section 4: Outline and First Draft
Chapter 2: Reasoning and Rhetoric
Section 1: Structure of an Argument
Section 2: Logical Fallacies
Section 3: Using Rhetoric
Section 4: Considering the Audience
Chapter 3: Revising
Section 1: Rewriting Paragraphs
Section 2: Revision Checklist
Section 3: Acknowledging Sources
Section 4: Format and Bibliography
E906
Literature
E907
Chapter 1: Narration
Section 1: Writing Descriptions
Section 2: Writing About People
Section 3: Writing About Places
Section 4: Writing About Events
Chapter 2: Biographies
Section 1: Creating a Timeline
Section 2: Gathering Facts
Section 3: Making It Personal
Section 4: Fictionalizing Biography
Chapter 3: Business Documents
Section 1: Writing Business Letters
Section 2: Memoranda
Section 3: Policies and Manuals
E908
Literature
E909
Chapter 1: Nouns
Section 1: Types of Nouns
Section 2: Functions of Nouns
Section 3: Plural Nouns
Section 4: Possessive Nouns
Chapter 2: Verbs
Section 1: Linking and Helping Verbs
Section 2: Verb Tenses
Section 3: Irregular Verbs
Section 4: Progressive Verbs
Section 5: Subject and Verb Agreement
Chapter 3: Adjectives
Section 1: Forms of Adjectives
Section 2: Some Qualities of Adjectives
Section 3: Making Comparisons
Section 4: Suffixes
E910
Chapter 1: Pronouns
Section 1: Types of Pronouns
Section 2: Finding the Case
Section 3: Creating Pronoun Agreement
Section 4: Problems with Pronouns
Chapter 2: Adverbs
Section 1: Functions of Adverbs
Section 2: Kinds of Adverbs
Section 3: Making Comparisons
Section 4: Special Points with Adverbs
Chapter 3: Other Parts of Speech
Section 1: Conjunctions
Section 2: Prepositions
Section 3: Some Rules with Prepositions
Section 4: Interjections

9th Grade MATHEMATICS (Geometry)

Ninth grade students learn points and lines, line segments, rays, planes, and lines and points in planes. They study definitions of angles and degrees and measuring the size of angles. They learn to classify angles by size and relation and how to bisect an angle. Students study parallelograms, properties of a trapezoid, ratio and proportions, and the Pythagorean Theorem. Ninth grade students know derive and solve problems involving the perimeter, circumference, area, volume, lateral area, and surface area of common geometric figures. Students know the definitions of basic trigonometric functions defined by the angles of a right triangle. They also know and are able to use elementary relationships between functions.

M901
Chapter 1: Geometry Basics
Section 1: Points and Lines
Section 2: Line Segments
Section 3: Rays
Chapter 2: Planes and Intersections
Section 1: Planes
Section 2: Lines and Points in Planes
Section 3: Intersections of Planes
Chapter 3: Geometric Shapes
Section 1: Polygons
Section 2: Triangles and Rectangles
Section 3: Measurements

M902
Chapter 1: Angles and Measurement of Angles
Section 1: Definition of an Angle
Section 2: Definition of a Degree
Section 3: Measuring the Size of Angles
Chapter 2: Types of Angles
Section 1: Types of Angles by Size
Section 2: Types of Angles by Relation
Chapter 3: Constructing Angles
Section 1: Constructing Angles of a Specified Size
Section 2: Constructing Equal Angles
Section 3: Bisecting an Angle

M903
Chapter 1: Prerequisites For Creating Proofs
Section 1: Properties of Congruence and Equality
Section 2: Logical Arguments
Chapter 2: Creating Proofs
Section 1: Basic Instructions For Creating Proofs
Section 2: Formal Proofs with Supplementary and Complementary Angles
Chapter 3: More Proofs
Section 1: Formal Proofs with Perpendicular Lines
Section 2: Distance

M904
Chapter 1: Planes, Lines and Parallel Lines
Section 1: Planes and Lines
Section 2: Properties of Parallel Lines
Chapter 2: Proving Parallel Lines
Section 1: Methods of Proving Parallel Lines- Converse Reasoning
Section 2: Parallel Postulate
Chapter 3: Anatomy of Polygons
Section 1: Anatomy of a Polygon
Section 2: Triangle Angles
Section 3: Polygon Angles

M905
Chapter 1: Proving Triangles Are Congruent
Section 1: Corresponding Parts of Triangles
Section 2: Congruent Triangles
Section 3: SSS ,SAS, ASA Postulates
Chapter 2: More Methods of Proving Congruence
Section 1: Overlapping Triangles
Section 2: AAS and HY-LEG
Chapter 3: Applications of Congruent Triangles
Section 1: Proving Segments and Angles Are Congruent
Section 2: Proving Bisectors and Perpendicular Lines with Congruent Triangles

M906
Chapter 1: Classification of Triangles and Segments
Section 1: Types of Triangles
Section 2: Auxiliary Lines
Section 3: Altitude and Median
Chapter 2: Isosceles Triangles in Proofs
Section 1: Base Angles Theorem
Section 2: Double Congruence Proofs
Chapter 3: Geometric Inequalities
Section 1: Review of Inequalities
Section 2: Triangle Inequalities

M907
Chapter 1: Parallelograms
Section 1: Properties of Parallelograms
Section 2: Diagonals in Parallelograms
Chapter 2: Special Parallelograms
Section 1: Rectangle, Rhombus, and Square
Section 2: Proving a Quadrilateral is a Parallelogram
Section 3: Parallelogram Properties and Triangles
Chapter 3: Trapezoids

Section 1: Properties of a Trapezoid
Section 2: Isosceles Trapezoids
M908
Chapter 1: Ratio, Proportion, and Similarity
Section 1: Ratio and Proportions
Section 2: Similar Polygons
Section 3: Right Triangles and Pythagorean Theorem
Chapter 2: Circles
Section 1: Circles and Parts of Circles Defined
Section 2: Congruent Arcs and Chords
Chapter 3: Chords and Angle Measurements
Section 1: Chord Theorems, Secants, and Tangents
Section 2: Angle Measurements
M909
Chapter 1: Chord, Tangent, and Secant Segments
Section 1: Equidistant Chords and Tangents
Section 2: Chord, Tangent and Secant-Segment Relationships
Section 3: Circumference and Arc Lengths
Chapter 2: Area and Volume
Section 1: Areas of Polygons
Section 2: Area of Regular Polygons
Section 3: Areas of a Circle, Sector, and Segment
Section 4: Geometric Solids and Volume
Chapter 3: Coordinate Geometry
Section 1: Coordinate Plane
Section 2: Area by Coordinates
Section 3: Midpoint, Distance, Slope Equations
Section 4: Proofs with Coordinates
M910
Chapter 1: Numerical Descriptive Methods
Section 1: Arithmetic Mean and Median
Section 2: Range, Variance, and Standard Deviation
Chapter 2: Probability
Section 1: Experiments, Populations and Events
Section 2: Permutations and Combinations
Chapter 3: Probability of an Event and Probability Laws
Section 1: Probability of an Event
Section 2: Event Relations
Section 3: Additive and Multiplicative Laws of Probability

9th Grade SCIENCE (Physical Science)

Ninth grade students study the origin of the solar system, space distance, dating techniques, and discovering small planetary bodies. They learn the concept of a galaxy, galaxy classification, and about protogalaxies. Students study the earth's layers, the Continental Drift Theory, seafloor spreading, types of tectonic plates, volcanoes and earthquakes. Ninth grade students study the greenhouse effect, climates, and the biosphere. They study thermal layers and the ozone layer. Students study mountain regions, the desert, the great central valley region, and the coastal ranges.

S901
Chapter 1: The Ancients
Chapter 2: The Greeks (600 B.C. – 150 A.D.)
Chapter 3: The European Era
Chapter 4: Modern Astronomy
S902
Chapter 1: Varying Belief Systems On Origin
Chapter 2: Evolutionary Overview
Chapter 3: Our Solar System
Section 1: The Planets
Section 2: Classification of Planets
Section 3: Smaller Objects
Section 4: Meteors
Section 5: The Moon
Section 6: Space Distance
Section 7: Origin of the Solar System
Section 8: Solar System Research
Section 9: Dating Techniques
S903
Chapter 1: The Energy of the Sun
Section 1: The Sun and Alpha Centauri
Section 2: The Sun's Spots
Section 3: Nuclear Energy
Chapter 2: Asteroids
Section 1: Discovering Small Planetary Bodies
Section 2: Asteroid Groups
Section 3: Asteroid Impact
Chapter 3: Planets and Other Stars
Section 1: Pulsars
Section 2: Beta Pictoris
Section 3: 51 Pegasi and Stars
S904
Chapter 1: Introduction to Galaxies
Section 1: What is a Galaxy
Section 2: Galaxy Classification
Section 3: Types of Galaxies
Chapter 2: A Closer Look At Galaxies
Section 1: Protogalaxies
Section 2: Parts of the Milky Way
Section 3: Dark Matter
Chapter 3: History of Galaxy Study
Section 1: Early Ideas
Section 2: Quasars and Other Developments
S905
Chapter 1: Stars
Section 1: Introduction to Stars
Section 2: Star Classification
Section 3: Star Characteristics
Chapter 2: A Star's Life
Section 1: Protostars
Section 2: The End of a Star
Section 3: Novas and Supernovas
Chapter 3: Cosmology
Section 1: The Big Bang
Section 2: Particle Accelerators
S906
Chapter 1: Planet Earth
Section 1: The Earth's Layers
Section 2: Rocks
Section 3: The Earth's Ages
Chapter 2: Earth Activity
Section 1: Continental Drift Theory
Section 2: Seafloor Spreading
Chapter 3: Plate Tectonics
Section 1: Plate Tectonic Theory
Section 2: Types of Tectonic Plates
Section 3: Volcanoes and Earthquakes
S907
Chapter 1: Earth's Atmosphere
Section 1: The Atmosphere's Layers
Section 2: Clouds
Chapter 2: Sunlight: Absorption, Reflection and Photosynthesis
Section 1: Sunlight
Section 2: Photosynthesis
Section 3: Absorption and Reflection
Chapter 3: The Greenhouse Effect
Section 1: The Greenhouse Effect
Section 2: The Earth's Radiation Budget
S908
Chapter 1: Earth's Hydrosphere
Section 1: Water
Section 2: Properties of Water
Section 3: The Hydrologic Cycle
Chapter 2: The Ocean
Section 1: The Physical Characteristics of the Ocean
Section 2: Ocean Features
Chapter 3: Parts of the Ocean
Section 1: Currents and Waves
Section 2: Layers, Zones, and Realms
S909
Chapter 1: The Earth's Climate
Section 1: Latitude and Climate
Section 2: Water and Climate
Section 3: Air Pressure and Climate
Chapter 2: Climate Types
Section 1: Major Climate Types
Section 2: Low-Latitude Climates

Section 3: Mid-Latitude Climates
Section 4: High-Latitude Climates
Chapter 3: Climate Phenomena
Section 1: Extreme Climate - Deserts and Rainforests
Section 2: Climate Events
Section 3: Global Warming
S910
Chapter 1: Biogeochemical Activity
Section 1: The Biosphere
Section 2: Biogeochemical Processes
Section 3: Gaseous Vs. Sedimentary Cycles
Chapter 2: The Carbon Cycle
Section 1: Carbon and the Carbon Cycle
Section 2: How the Carbon Cycle Works
Chapter 3: Other Cycles
Section 1: The Nitrogen Cycle
Section 2: The Sulfur Cycle
Section 3: Other Nutrient Cycles
S911
Chapter 1: The History of the Atmosphere
Section 1: The Atmosphere's Origins
Section 2: Outgassing
Chapter 2: The Development of Atmospheric Gases
Section 1: Oxygen and Nitrogen
Section 2: The Secondary Atmosphere
Chapter 3: The Atmosphere's Layers
Section 1: The Thermal Layers
Section 2: Electricity and Composition
Section 3: The Ozone Layer
S912
Chapter 1: California's Geography
Section 1: Overview of California's Geography
Section 2: The Mountain Regions
Chapter 2: The Northern and Eastern Regions
Section 1: The Klamath Mountain Region and the Modoc Plateau
Section 2: The Pacific Mountain System
Section 3: The Great Basin
Chapter 3: The Southern, Central, and Coastal Regions
Section 1: The Desert
Section 2: The Great Central Valley Region
Section 3: The Coastal Ranges
Section 4: The San Andreas Fault and Hazard Zones

9th Grade SOCIAL STUDIES (World Geography)

Ninth grade students study world geography and the continents of the world. They study maps and globes, and learn to coordinate locations on a grid. Students study landforms and topographical maps. Ninth grade students study South America, Asia, Africa, The Middle East, Australia, Antarctica, Europe, Canada, and the United States. They study geographical features of these countries, as well as the economies and people of the countries.

SS901
Chapter 1: World Geography—Continents of the World
Section 2: Location
Section 3: Place
Section 4: Human-Environment Interactions
Section 5: Movement
Section 6: Regions
Section 7: Continents
Section 8: Oceans
Chapter 2—Maps and Globes
Section 1: Lines of Latitude
Section 2: Lines of Longitude
Section 3: Coordinate Locations On a Grid
Section 4: Hemispheres
Section 5: Map Projections
Section 6: Mercator Projection
Section 7: Mollweide Projection
Section 8: Robinson Projection
Section 9: Azimuthal Projection
Section 10: Sinusoidal Projection
Section 11: Other Projections
SS902
Chapter 1: Landforms and Topographical Maps
Section 1: Landforms
Section 2: Vocabulary
Section 3: Topographical Maps
Section 4: Where Are We—Or How to Read a Map
Section 5: Map Legends
Chapter 2: Climates, Sub-Climates, Prevailing Winds
Section 1: Climates
Section 2: Sub-Climates
Section 3: Prevailing Winds
Section 4: Vocabulary
Section 5: Oceans
Section 6: Ocean Currents
Chapter 3: Calendars & International Dateline
Section 1: Introduction
Section 2: The Sun, Sundials, and Calendars
Section 3: Vocabulary
Section 4: International Dateline
SS903
Chapter 1: Geographical Features of Africa
Section 1: Introduction to Africa
Section 2: Where in the World is Africa?
Section 3: Vocabulary
Section 4: Landforms
Section 5: The People of Africa
Section 6: Climates and Precipitation
Section 7: Agriculture of Africa
Chapter 2: Deserts
Section 1: Desert Landforms
Section 2: Desert Plants
Section 3: Desert Animals
Section 4: People of the Desert
Chapter 3: Modern Africa
Section 1: Education
Section 2: Economics
Section 3: Health
Section 4: Biography Book Report On Nelson Mandela
SS904
Chapter 1: The Middle East
Section 1: Introduction
Section 2: Where in the World is the Middle East?
Section 3: Landforms of the Middle East
Section 4: Country Research
Section 5: Vocabulary
Section 6: Climates and Precipitation
Chapter 2: Oil
Section 1: How It Forms
Section 2: Transportation
Section 3: Refinement and Uses
Section 4: Pollution
Chapter 3: The Middle East Today
Section 1: People of the Middle East
Section 2: Education
Section 3: Economics
SS905
Chapter 1: Geographical Features of Asia
Section 1: Introduction to Asia
Section 2: Where in the World is Asia?
Section 3: Landforms
Section 4: Vocabulary
Section 5: Climates and Precipitation
Chapter 2
Section 1: Earthquakes – a Little History
Section 2: The Structure of the Earth
Section 3: Primary and Secondary Body Waves
Section 4: Tectonic Plates
Section 5: Tsunamis and Other Effects of Earthquakes
Chapter 3: Asia Today
Section 1: Facing the Future
Section 2: Health and Education
Section 3: Biography Book Report On Mahatma Gandhi
SS906
Chapter 1: Geographical Features of Australia and Oceania
Section 1 : Introduction

Section 2: Where in the World is Australia and Oceania, Landforms, Map Work
Section 3: Vocabulary
Section 4: Climates and Precipitation
Chapter 2: Coral Reef
Section 1: How They Form
Section 2: Types of Coral and Sea Creatures of a Reef
Section 3 : Pollution
Section 4: Australian Animal Report
Chapter 3: Australia Today
Section 1: The People
Section 2: Education, Health Care, and Life in the Outback
Section 3: Economics
SS907
Chapter 1: Geographical Features of Antarctica
Section 1: Introduction to Antarctica
Section 2: Where in the World
Section 3: Ice: Sheets, Shelves, and Bergs
Section 4: Mountain and Valleys
Section 5: Islands and Volcanoes
Section 6: Vocabulary
Section 7: Explorers
Chapter 2: Life On Ice
Section 1: Climate and Precipitation
Section 2: The Researchers
Section 3: Animal Research
Section 4: Plants
Chapter 3: The Arctic
Section 1: The Arctic: Aka the North Pole
Section 2: Climate
Section 3: Life in the Arctic
Section 4: Biography Book Report On Roald Amundsen
SS908
Chapter 1 Geographical Features of Europe
Section 1: Introduction
Section 2: Where in the World is Europe
Section 3: Map Work, Landforms
Section 4: Climates and Precipitation
Chapter 2: Rivers
Section 1: Introduction, How Rivers Flow
Section 2: Floods
Section 3: Flood Control
Section 4: Rivers At Work
Chapter 3: Europe Today
Section 1: Education
Section 2: Health-Care
Section 3: Biography Book Report of Winston Churchill
SS909
Chapter 1: Geographical Features of North America
Section 1: Introduction to North America
Section 2: Mountains
Section 3: Mountain Plant Life
Section 4: Mountain Climate
Section 5: Climate Zones of North America
Chapter 2: Canada Today
Section 1: Introduction to Canada
Section 2: Natural Resources
Section 3: Economics
Section 4: Education
Section 5: Health
Chapter 3: The Us Today
Section 1: Introduction to the United States of America
Section 2: Natural Resources and Economy
Section 3: Education
Section 4: Health
SS910
Chapter 1: Mexico, Central America and the West Indies
Section 1: Introduction
Section 2: Climate and Precipitation
Section 3: Health and Education
Section 4: Economy
Chapter 2: Hurricanes
Section 1: Introduction
Section 2: How a Hurricane Develops
Section 3: Watches, Warnings, and Hunters
Section 4: Monster Storms
Chapter 3: The West Indies
Section 1: Introduction
Section 2: Climate and Precipitation
Section 3: Education and Health
Section 4: Economy
SS911
Chapter 1: South America
Section 1: Introduction
Section 2: South America
Section 3: Climate and Precipitation
Chapter 2: Rainforests of the World
Section 1: Introduction
Section 2 Rainforest Flora
Section 3: Fauna
Section 4: How to Write a Bibliography
Section 5: The Destruction of the World's Rainforest
Chapter 3: South America Today
Section 1: The People of South America
Section 2: Health
Section 3: Education
Section 4: Economics
SS912
Chapter 1: What's in the Report
Section 1: Introduction
Section 2: Outline
Section 3: Country Report Points Page
Chapter 2: The Nuts and Bolts
Section 1: Note Cards
Section 2: Rough Draft
Section 3: Text Title Page
Section 4: Maps Table of Contents
Section 5: Bibliography
Chapter 3: The Enhancements
Section 1: What is an Enhancement?

Section 2: Timeline
Section 3: Travel Brochure
Section 4: National Anthem
Section 5: Recipe
Section 6: Traditional Dress
Section 7: Country Flag
Section 8: It’s Greek (and Latin) to Me!