
Eighth Grade

Math

Power Verbs

Number, Number Sense and Operations Standard

Add	Determine	Find	Subtract
Apply	Divide	Multiply	Use
Compare	Estimate	Recognize	
Compute	Explain	Solve	

Measurement Standard

Analyze	Convert	Find	Use
Apply	Demonstrate	Justify	
Calculate	Derive	Order	
Compare	Determine	Solve	

Geometry and Spatial Sense Standard

Analyze	Draw	Represent	
Determine	Recognize	Use	

Patterns, Functions and Algebra Standard

Compare	Evaluate	Interpret	Write
Compute	Explain	Simplify	
Describe	Extend	Solve	
Differentiate	Identify	Use	

Data Analysis and Probability Standard

Calculate	Demonstrate	Evaluate	Make
Compare	Describe	Explain	Use
Construct	Determine	Identify	
Create	Differentiate	Interpret	

Eighth Grade

Math

Key Terms and Concepts

Number, Number Sense and Operations Standard

approximate	inverse relationships	radicals
consecutive integers	(addition/ subtraction,	ratio
estimate	multiplication/ division, squaring/ square roots)	rational numbers
estimates in relation to actual answers (very close, less than, greater than)	irrational numbers	real number system
exact answer	natural numbers	reasonableness
identity property	non-perfect squares	root
integer exponents	order of operations	scientific notation
integers	percent	simplify expressions
inverse property	perfect squares	square root
	proportion	subsets
		whole numbers

Measurement Standard

angle	height	pyramids
area	indirect measurements	quadrilaterals
base area	interior angles	radius
circles	kilogram	rates
circumference	kilometer	reasonableness
cones	liter	regular convex polygons
convert units	metric units	relative size
cylinders	mile	spheres
degrees Celsius	models	sum
degrees Fahrenheit	perimeter	surface area
density	pound	triangles
derived measurements	precision	U.S. customary units
exterior angles	prisms	velocity
formulas	proportional reasoning	volume
gallon	proportional relationships	
geometric models	protractor	
graphs		

Eighth Grade

Math

Key Terms and Concepts

Geometry and Spatial Sense Standard

angles	parallel lines	rotations
characteristics	part-to-part	shapes
cones	part-to-whole	sides
conjectures	prisms	symmetry
coordinate geometry	properties	three-dimensional objects
coordinates	properties that remain fixed	translations
corresponding sides	proportions	transversal
cylinders	pyramids	two-dimensional figures
dilations	quadrilateral	vertex
intersect	reflections	
lines	relationship	
nets		

Patterns, Functions and Algebra Standard

algebraic expressions	inverse variation	simple quadratic equations
coefficient of x	linear	simple substitution
constant	linear functions	slope
continuous	midpoint	solution of a 2 by 2 system of equations
covariants	monomials	symbolic algebra
direct variation	noncontinuous	symbolically
distance	nonlinear	table
equation	nonlinear functions	variables
graph	nonlinear growth pattern	y depends on x
graphically	n th term	y -intercept
inequalities	patterns	
intercepts	polynomials	
interest compounded over time	sequences	
	set of ordered pairs	

Eighth Grade

Math

Key Terms and Concepts

Data Analysis and Probability Standard

analysis	line graph	probability
approximate line of best fit	mean's sensitivity to extremes	random sample
circle graph	measures of center (mean, mode, median)	relative size of a sample
conjectures		representative sample
continuous data		scatterplot
convenience sample	measures of spread (range, quartiles, interquartile range, percentiles)	selecting samples
convincing arguments		sets of data
discrete data		survey response
disjoint event	possible outcomes	target population
independent event	predictions	validity
		variants

Eighth Grade

Reading/Writing

Power Verbs

Phonemic Awareness, Word Recognition, and Fluency

Fluency continues to develop past the primary grades.

Acquisition of Vocabulary

Apply	Determine	Identify
Define	Examine	Infer

Reading Process:

Concepts of Print, Comprehension Strategies and Self-Monitoring Strategies

Students should read purposefully and automatically, using the comprehension and self-monitoring strategies outlined in previous grades.

Reading Applications: Informational, Technical and Persuasive Text

Analyze	Compare	Distinguish	Recognize
Assess	Contrast	Identify	

Reading Applications: Literary Text

Analyze	Contrast	Identify
Compare	Explain	

Writing Processes

Apply	Develop	Organize	Vary
Analyze	Establish	Proofread	
Conduct	Generate	Rearrange	
Determine	Group	Reread	

Eighth Grade

Reading/Writing

Power Verbs

Writing Applications

Produce Write

Writing Conventions

Conjugate Maintain Use

Research

Compare	Explain	Integrate
Compile	Generate	Organize
Compose	Identify	Select

Communication: Oral and Visual

Apply	Demonstrate	Interpret	Support
Adjust	Determine	Monitor	Vary
Analyze	Draw	Organize	
Deliver	Identify	Select	

Eighth Grade

Reading/Writing

Key Terms and Concepts

Phonemic Awareness, Word Recognition, and Fluency

Fluency continues to develop past the primary grades.

Acquisition of Vocabulary

analogical statements	denotation	literal meaning
Anglo-Saxon roots	dictionary	metaphor
antonyms	figurative language	pronunciation
complex words	figurative meaning	simile
connotation	glossary	synonyms
context clues	Greek roots	textual features
definitional footnotes	idioms	thesaurus
definitional sidebars	Latin roots	unknown words

Reading Process:

Concepts of Print, Comprehension Strategies and Self-Monitoring Strategies

comparing	making predictions	reading to
contrasting	note taking	perform a task
drawing conclusions	reading comprehension	recalling
evaluative questions	strategies	scanning
independent reading	reading for enjoyment	skimming
materials	reading for literary	summarizing
inferential questions	experience	summarizing
literal questions	reading on	synthesizing questions
looking back	reading to gain	
making inferences	information	

Eighth Grade

Reading/Writing

Key Terms and Concepts

Reading Applications: Informational, Technical and Persuasive Text

author's argument	emotional word	overlays
author's perspective	repetition	persuasive techniques
author's purpose	format	present opinions
author's viewpoint	functional or workplace documents	problem-solution
bandwagon	graphs	product information
bias	headers	public documents
cause-effect	informational text	purpose
characteristics of consumer materials	instructional materials	scope
charts	instructions	sources
chronological	intended audience	speeches
cite facts	job-related materials	stereotyping
compare-contrast	key points	tables
cutaways	maps	testimonial
diagrams	memoranda	text features
draw inferences	newspaper editorials	treatment
effectiveness	organization of ideas	warranties
	organizational structure	

Reading Applications: Literary Text

climax	mood	symbols
conflicts	objective point of view	syntax
dynamic characters	omniscient point of view	third person limited point of view
figurative language	parallel episodes	tone
first person point of view	plot	types of characters
flashback	points of view	universal themes
flat characters	round characters	voice
foreshadowing	setting	word choice
genre	static characters	
interactions	subjective point of view	
	subplots	

Eighth Grade

Reading/Writing

Key Terms and Concepts

Writing Processes

action verbs	feedback	rubric
audience	focus	run-on
background reading	fragments	sensory details
body	grammar	simple sentence
capitalization	graphs	structure
charts	informational writing	spacing
checklist	interviews	spelling
clarity	introduction	stated central idea
colorful modifiers	margins	style
columns	narrative writing	surveys
complex sentence	organizational strategies	tabs
structure	outlines	thesaurus
compound sentence	parallel structure	thesis statement
structure	point of view	topic sentences
conclusion	precise language	transitional words and
content structure	principles of design	phrases
conventions	punctuation	
dictionary	purpose	
drawings		

Writing Applications

action	inconsistencies	persuasive compositions
arguments	informal writings	poems
audience	informational essays	prior knowledge
audience needs	irrelevant information	purpose
bibliography	job applications	sense of closure
business letters	journals	sources of information
cite	letters to the editor	specific references
complex characters	literary devices	stated purpose
context	main ideas	style
controlling idea	narratives	support judgments
document	notes	suspense
engaging plot	pacing	tension
extraneous details	perspective	tone

Eighth Grade

Reading/Writing

Key Terms and Concepts

Writing Conventions

adjective	infinitive phrase	phrase
adverb	interjection	preposition
clause	irregular verb	pronoun
conjunction	main clause	regular verb
correct capitalization	modifiers	spelling conventions
correct punctuation	noun	subordinate clause
eight parts of speech	parallel structure	verb
gerund phrase	participial phrase	verb tense

Research

accuracy	notes	source
authority	objectivity	acknowledgement
balance	online database	sources
chart	open-ended question	structure for organizing information
citation	oral report	style guide
clear position	original ideas	table
communication techniques	outline	theme
coverage	primary source	topic
electronic resource	publication date	validity
format	quotation	visual report
graphic organizer	research question	written report
Internet-based resource	researched information	
multimedia report	school library catalog	
	secondary source	

Eighth Grade

Reading/Writing

Key Terms and Concepts

Communication: Oral and Visual

active listening strategy	descriptive presentation	media messages
anecdotes	diagrams	opinion
appeal to emotion	emotional word	pace
audience	repetition	persuasive presentation
bait and switch	enunciation	persuasive technique
bandwagon	essential information	primary source
biased material	evidence	problem-solution
cause-effect	expository	purpose
charts	eye contact	quotations
clarity	fallacies of reasoning	repetition
common organizational structures	formal presentation	research
compare-contrast	glittering generalities	secondary source
consistent organizational structure	hidden agendas	slanted material
controlled argument	illustrations	speaker's choice of language
controlling idea	inflection	statistics
counter-arguments	informal presentation	testimonial
credibility of the speaker	informational presentation	thesis
cues	listener bias	voice modulation
delivery style	logical argument	
	logical sequence	

Eighth Grade

Science**Power Verbs**

Earth and Space Sciences

Compare	Examine	Illustrate	Use
Describe	Explain	Name	

Life Sciences

Describe	Explain	Investigate	Recognize
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Physical Sciences

Demonstrate	Describe	Explain
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Science and Technology

Design	Evaluate	Examine
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Scientific Inquiry

Apply	Choose	Describe
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Scientific Ways of Knowing

Explain	Identify
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Eighth Grade

Science

Key Terms and Concepts

Earth and Space Sciences

asteroids	interior structure	probes
composition of comets	interstellar distances	rock cycle
constructive processes	landforms	rock layers
convergent	life cycle	satellite images
crustal deformation	light years	satellites
days	magma	seasons
deposition of sediment	mantle	shooting star
destructive processes	meteor	solar system
divergent	meteorite	spacecraft
dominate force	meteoroids	star
Earth's crust	moon cycles	tectonic plates
earthquakes	motions	telescopes
eclipses	mountain building	thermal energy
erosion	mountains	tides
faulting	ocean trenches	topographic maps
folding	orbit	transform
forces	phenomena	universe
galaxies	planetary atmosphere	uplifting
geological events	planets	volcanic eruptions
globes	plate boundaries	volcanoes
gravitational force	plate motion	weathering
hot spots	predictable motions	years

Eighth Grade

Science

Key Terms and Concepts

Life Sciences

adapted	fossil record	species
asexual reproduction	genetic continuity	structure
behavior	gradual processes	survival
detrimental	organism	traits
characteristics	physiology	variations
diversity of species	reproductive success	
extinct	sexual reproduction	

Physical Sciences

change in position	reference point	vibrations
direction	sound waves	waves
earthquake waves	speed	
motion	transfer energy	
object	unbalanced force	

Science and Technology

build a product	geographic location	solution
constraints	limited resources	supply of materials
create a solution	limits of cost and time	unavoidable factors
cultures	for design and	
economic considerations	production	
effectiveness	political considerations	
environmental effects	product design	
	social considerations	

Eighth Grade

Science**Key Terms and Concepts**

Scientific Inquiry

charts	maps	quantitative data
control	math skills	safety procedures
data	mean	sample size
diagrams	median	symbols
graphs	mode	tables

Scientific Ways of Knowing

bias	inference	significance
description	objective	summary
explanation	observation	
importance	prediction	

Eighth Grade

Social Studies

Power Verbs

History

Analyze	Explain	Identify	Select
Describe			

People in Societies

Analyze	Describe	Explain	Trace
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Geography

Analyze	Compare	Explain	
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Economics

Discuss	Explain		
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Government

Analyze	Describe	Explain	
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Citizenship Rights and Responsibilities

Evaluate	Explain	Show	
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Social Studies Skills and Methods

Compare	Identify	Organize	Write
Construct			

Eighth Grade

Social Studies

Key Terms and Concepts

History

Abolitionist movement	consequences	Louisiana Purchase
Abraham Lincoln	cultural exchange	Loyalists
African-Americans	Declaration of Independence	Manifest Destiny
agricultural exchange	domestic problems	Mexican-American War
Alexander Hamilton	Dred Scott Decision	Missouri Compromise
alliances	economics	multiple-tier time line
American Indians	economic opportunity	national bank
American Revolution	economies of the North and South	national security
Andrew Johnson	Emancipation Proclamation	neutral colonists
Anti-Federalist	European settlers	new republic
appeals	Federalist	North America
assassination	Fifteenth Amendment	Northwest Ordinance
authority of the central government	Fourteenth Amendment	Patriots
balance of power	Frederick Douglass	petitions
Battle of Gettysburg	freedmen	political
Bill of Rights	French	Proclamation of 1763
black codes	George Washington	ratifying
Boston Tea Party	Great Compromise	Reconstruction
boycotts	impeachment	religion
British	independent federal court system	religious
Cabinet	Intolerable Acts	representative governments
Civil War	John Brown	Robert E. Lee
collecting revenue	Kansas-Nebraska Act	secession
colonial assemblies	Ku Klux Klan	Senate
colonial powers	Lewis and Clark expedition	slavery
colonies	Lincoln-Douglas debates	Sons of Liberty
colonization		Spanish
Compromise of 1850		stable economic system
conflicts		Stamp Act

Eighth Grade

Social Studies

Key Terms and Concepts

History (continued)

state constitutions	Three-Fifths	Ulysses S. Grant
states' rights	Compromise	Union
Tea Act	town meetings	war debts
Texas War for Independence	Townshend Acts	Westward movement
Thirteenth Amendment	two-term presidency	women
	U.S. Constitution	

People in Societies

American Indians	historical limitations	religious factors
colonies	Indian removal	religious freedom
common national identity	institutionalized discrimination	resistance to slavery
discrimination	institutionalized racism	stereotyping
economic factors	land acquisition	treaties
enslavement of Africans in North America	political factors	United States
equal rights	prejudice	white settlers
geographic factors	racism	women in U.S. society
	religious diversity	

Geography

colonization	land use	settlement patterns
communication	physical characteristics	social characteristics
economic activities	places	transportation
economic characteristics	political characteristics	United States
environment	population	westward expansion
geographic patterns	population distribution	
immigration	regions	

Eighth Grade

Social Studies

Key Terms and Concepts

Economics

Articles of
Confederation
Civil War
establishment
of colonies
global trading
mercantilism

power to regulate
the economy
productive resources
property rights
regulation of
economic activity
tariffs

trade barriers
U.S. Constitution
U.S. economy
uneven distribution

Government

Articles of
Confederation
bicameralism
Bill of Rights
checks and balances
conflict
Declaration of
Independence
due process
economic instability
Enlightenment
equal protection
of the laws
establishment of a
national bank
expansion of the
United States

federalism
freedom of assembly
freedom of petition
freedom of press
freedom of religion
freedom of speech
government
how a bill
becomes a law
loose interpretation of
the Constitution
natural rights
Northwest Ordinance
order and security
payment of debt
political concepts
political parties

powers of government
principles of
self-government
representative
democracy
right to counsel
rights of citizens
rights of individuals
separation of powers
Shays's Rebellion
strict interpretation of
the Constitution
trial by jury
U.S. Constitution
use of territory

Eighth Grade

Social Studies

Key Terms and Concepts

Citizenship Rights and Responsibilities

Abolitionist movement	expansion of the	serving on juries
active campaigning	franchise	slavery
American independence	Frederick Douglass	Sons of Liberty
Andrew Jackson	having rights	state constitutional
citizenship	historical figures	conventions
civic participation	Indian removal	staying informed on
Committees of	individual and public	issues
Correspondence	goals	Thomas Jefferson
Declaration of	nominating conventions	trial by jury
Independence	political bodies	Underground Railroad
disenfranchisement of	respecting the rights of	voting
free blacks	others	women's rights
Elizabeth Cady Stanton	rights of individuals	

Social Studies Skills and Methods

citation of sources	historical narrative	point of view
era	manage conflict	position paper
event	nonfiction sources	primary sources
fiction sources	oral presentation	secondary sources