
Twelfth Grade

Math**Power Verbs**

Number, Number Sense and Operations Standard

Apply Determine

Measurement Standard

Apply Solve

Geometry and Spatial Sense Standard

Derive Recognize Relate Use

Patterns, Functions and Algebra StandardAnalyze Describe Represent Translate
Compare Make Solve**Data Analysis and Probability Standard**

Apply Describe Identify Transform

Twelfth Grade

Math

Key Terms and Concepts

Number, Number Sense and Operations Standard

associative property	commutative property	operations
Binomial Theorem	complex numbers	workplace problem solutions
closure property	connections	
coefficients	identity property	
combinations	inverse property	

Measurement Standard

acceleration	limits in measurement situations	radian measures
accurate approximations		successive approximation
angular velocity	lower bounds	upper bounds
derived measurements	pressure	

Geometry and Spatial Sense Standard

angle addition	double angle	simple curves
angle subtraction	hyperbolic	specific shapes and properties
basic trigonometric identities	matrices	spherical
compositions	multiple geometries	translations
conic sections	plane	
dilations	reflections	
	rotations	

Twelfth Grade

Math

Key Terms and Concepts

Patterns, Functions and Algebra Standard

arithmetic	global behavior	periodic functions
asymptotic behavior	graph	point
bounded interval	instantaneous rate of change	polar coordinate system
Cartesian coordinate system	inverse	range
concept of limit	local behavior	sequence
domain	mathematical induction	series
extrema	number of roots	slope
general shape	numeric form	symbolic form
geometric	partitioning	tangent
		transcendental function

Data Analysis and Probability Standard

binomial	linear transformation	set of univariate data
bivariate data	logarithms	shape
census	mutually exclusive events	simulations
center	nonlinear relationship	spread
complementary events	normal	stratified random sample
conditional probability	probability distributions	summary statistics
convenience sample	random sample	theoretical probability
experimental probability function	random variable	uncertainty
informal inference	sampling distributions	uniform
linear function	sampling methods	voluntary response

Twelfth Grade

Reading/Writing

Power Verbs

Phonemic Awareness, Word Recognition, and Fluency

Fluency continues to develop past the primary grades.

Acquisition of Vocabulary

Analyze Determine Examine Recognize

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 Distinguish Examine
 Critique Evaluate

Reading Applications: Literary Text

Analyze Differentiate Explain Recognize
 Compare Evaluate Interpret

Writing Processes

Determine Generate Proofread Rearrange
 Establish Organize Reread

Twelfth Grade

Reading/Writing

Power Verbs

Writing Applications

Produce Write

Writing Conventions

Use

Research

Analyze Determine Integrate
Compose Identify

Communication: Oral and Visual

Adjust Critique Demonstrate Vary
Apply Deliver Evaluate

Twelfth 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	dictionary	sidebars
analogous relationships	example	simile
Anglo-Saxon	glossary	subject-area vocabulary
antonyms	Greek	suffix
complex words	Latin	symbols
connotation	meaning	synonyms
context	metaphor	textual features
definition	prefix	thesaurus
definitional footnotes	restatement	unknown words
denotation	roots	

Reading Process:

Concepts of Print, Comprehension Strategies and Self-Monitoring Strategies

comparing	note taking	reading to gain information
conclusion	prediction	reading to perform a task
contrasting	purpose	recalling
criteria	reading comprehension strategy	scanning
evaluative questions	reading for enjoyment	skimming
inference	reading for literary experience	summarizing
inferential questions	reading on	synthesizing questions
literal questions		
looking back		

Twelfth Grade

Reading/Writing

Key Terms and Concepts

Reading Applications: Informational, Technical and Persuasive Text

appeal to authority	instructions	sequencing of procedures
appeal to emotion	invalid inference	sources
appeal to reason	organizational patterns and techniques	stereotyping
audience	philosophical assumptions	syntax
beliefs	propaganda techniques	technical manuals
bias	public documents	travel schedules
business memoranda	purpose	unsupported inference
effectiveness of arguments	repetition of ideas	valid inference
explicit	rhetorical devices	validity of arguments
fallacious reasoning	sequence	visual appeal
format	sequencing of information	word choice
functional documents		workplace documents
headers		
implicit		

Reading Applications: Literary Text

aesthetic purposes	individual vs. nature	setting
allegory	individual vs. society	sounds of language
American literature	irony	style
British literature	literary text	subgenres
characterization	motivations	symbolism
conflicts	multi-cultural literature	theme
credibility	narrator	tone
diction	parody	universal themes
figurative language	plot	voice
freedom vs. responsibility	point of view	world literature
imagery	rhetorical purposes	
	satire	

Twelfth Grade

Reading/Writing

Key Terms and Concepts

Writing Processes

action verbs	graphics	purpose
adapting focus	graphs	reference materials
audience	inappropriate slang	repetitive sentence structure
background reading	informal language	resources
body	informational writing	rubric
capitalization	interview	run-on
charts	introduction	sensory detail
checklist	logical sequence	sentence length
clarity	margins	sentence structure
closing sentence	narrative writing	simple sentence
coherence	notes	spacing
colorful modifiers	organizational strategies	spelling
columns	organizational structure	strategy
complex sentence	outlines	style
compound sentence	paragraph	survey
conclusion	parallel sentence structure	tabs
content structure	personal style	thesaurus
conventions	point of view	thesis statement
dictionaries	precise language	tool
drawings	precise vocabulary	transition
edit	pre-writing task	voice
feedback	principles of design	
fragments	punctuation	
grammar		

Twelfth Grade

Reading/Writing

Key Terms and Concepts

Writing Applications

abstract comparisons	divergent interpretations	perspective
abstract concepts	evaluative	primary source
ambiguities	examples	proposals
analytical	expert opinion	purpose
appeal to emotion	formatting techniques	reflection
appeal to logic	functional documents	reflective
arguments	generalizations	relative value
assertion	informal writings (journals, notes and poems)	relevant perspectives
audience	informational essays	reliability of sources
author's use of stylistic devices	interpretative	requests for information
beliefs	judgment	resumes
biases	key ideas	rhetorical devices
cause-effect reasoning	letters of complaint	secondary source
clear position	memos	sense of closure
complexities	nuances	user-friendly
context	personal anecdote	validity of sources
controlling idea	personal experiences	viewpoints
counterclaims		

Twelfth Grade

Reading/Writing

Key Terms and Concepts

Writing Conventions

capitalization

indefinite pronouns

parallel structure

punctuation

relative pronouns

spelling

verb tenses

Research

accuracy of sources

authority

citations

complexities in
information

coverage

credibility of sources

discrepancies in
information

electronic resources

inquiry

Internet-based resources

in-text documentation

objectivity

online databases

open-ended questions

publication date

quotations

school library catalogs

sources

style guides

validity

Twelfth Grade

Reading/Writing

Key Terms and Concepts

Communication: Oral and Visual

active listening strategies	emotional appeal	organizing essential information
analogy	enunciation	persuasive presentations
anecdote	expository	persuasive strategies
appeal to authority	eye contact	phrasing
appeal to emotion	formal descriptive presentations	primary sources
appeal to logic	illustrations	problem-solution
appeal to pathos	inflection	quotations
appeal to reason	informal descriptive presentations	reasoning
case studies	informational presentations	relevant evidence
causation	introduction	reliability of sources
cause-effect	key points	repetition
changes in pace	language choice	research
charts	listener bias	rhetorical devices
clarity	logic	secondary sources
coherence	logical and controlled argument	selecting essential information
compare-contrast	logical sequence	speaking techniques
conclusion	monitoring message for clarity	statistics
controlling idea	mood	syntax
counter-arguments	noting cues	tone
delivery style	organizational structure	types of arguments
diagrams		validity of sources
diction		visual materials
distinctive perspective		voice modulation
effectiveness		

Twelfth Grade

Science**Power Verbs****Earth and Space Sciences**

Describe	Explain	Infer	Investigate
Estimate			

Life Sciences

Describe	Explain	Recognize	Trace
Examine			

Physical Sciences

Describe	Explain	Recognize	
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Science and Technology

Describe	Explain	Research	
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Scientific Inquiry

Clarify	Derive	Formulate	Research
Create			

Scientific Ways of Knowing

Analyze	Evaluate	Recognize	Select
Describe	Explain	Research	

Twelfth Grade

Science

Key Terms and Concepts

Earth and Space Sciences

absorbed	gravitational forces	reflected
atmospheric currents	ice caps	stars
electromagnetic radiation	large-scale motion of objects	technology
emitted	oceanic currents	thermal energy
galaxies	physical features	weather patterns

Life Sciences

abiotic changes	DNA	mutation
adaptation	ecosystems	nerve
atoms	egg	non-native species
biological activity	emigration	organic
biological theory	evolution theory	phloem
biotechnology	fats	physical organization
biotic changes	genes	protein molecules
blood	genetic drift	proteins
bonds	genetics	sources of energy
carbon-containing molecules	germ theory	specialized cells
chemical organization	historical development	specialized structures
climatic change	immigration	sperm
covalent	inheritance of traits	stoma
cytology	input of energy	strong chemical bonds
differentiation	life processes	sugars
disorganized states	living systems	sun
	muscle	xylem

Twelfth Grade

Science

Key Terms and Concepts

Physical Sciences

atomic bomb	gravitational forces	predictable rate
atomic energy levels	half-life	proportional
atoms	historical examples	quantum theory
bat echoes	hydrogen bomb	radioactive isotopes
chemical system	isotopes	repeating crystal patterns
decay rates	laws of motion	spontaneously decay
disorganized states	masses	superconducting
Doppler effect	nuclear distances	theory of relativity
ecological system	nuclear energy	unexpected findings
electric forces	nuclear forces	unstable
electromagnetic forces	nuclear reactions	wavelength
electron configurations	nuclei	wavelike radiation
emit	nucleus of an atom	weather radar
equilibrium	particles	
erosion of rocks	physical system	
force of attraction	police radar	

Science and Technology

economics	science-related	scientific understanding
ethics	challenges	technology-related
policies	scientific inquiry	challenges
politics	scientific knowledge	

Twelfth Grade

Science

Key Terms and Concepts

Scientific Inquiry

analyze data	independent variable	safety precautions
controls	mathematical	summary statistics
dependent variable	relationships	testable hypotheses
describe data	MSDS	variables
eyewash	OSHA	ventilation
goggles	predictive powers	

Scientific Ways of Knowing

alternative explanations	inaccessibility of	properties of
complexity	information	semiconductors
consequences	local level	scarcity of information
diverse cultures	national level	scientific concept
diverse people	perceptions	scientific model
ethical tests	predator-prey	scientific theory
faulty reasoning	relationship	similar phenomenon
global level	principle	social issues
historical contributions		

Twelfth Grade

Social Studies

Power Verbs

History

Analyze Challenge

People in Societies

Analyze Evaluate Identify

Geography

Analyze Describe Gather Manipulate
 Communicate Explain Interpret

Economics

Analyze Compare Explain Identify

Government

Analyze Explain Identify

Citizenship Rights and Responsibilities

Analyze Demonstrate Explain Prepare
 Compare Evaluate Practice

Social Studies Skills and Methods

Analyze Develop Formulate Propose
 Build consensus Engage Identify Research
 Construct Evaluate Obtain Respond

Twelfth Grade

Social Studies

Key Terms and Concepts

History

cause-and-effect relationships	Cuban Missile Crisis	influence of ideas
Civil War	historical inevitability	multiple causation
collective action	historical interpretation	role of chance
consequences	immigration policy	
	individual action	

People in Societies

Amnesty International	immigration quotas	preserving culture
bilingual education	institutions	Red Cross
changing culture	international	religious freedom
coeducation	governmental organizations	single-sex schools
current issues	multinational corporations	theocracies
diverse cultural groups	nongovernmental organizations	transmitting culture
English-only education	open immigration policy	United Nations
European Union	Organization of American States	World Council of Churches
forces of diversity	perspectives	World Court
forces of unity		
global arena		
guiding culture		

Geography

alternative sources of energy	environmental quality	neighborhoods
benefits	geographic information	shopping centers
civic issues	global issues	specialized buildings
costs	government policy	trade-offs
current ideals	human needs	unintended effects
current values	industrial parks	urban centers
economic growth	intended effects	wetland preservation
environmental concerns	mass transportation systems	

Twelfth Grade

Social Studies

Key Terms and Concepts

Economics

allocation	marginal cost	public policies
beliefs	money	services
benefits	multinational economic organizations	social economic decisions
circular flow model	North American Free Trade Agreement	unintended consequences
costs	Organization of the Petroleum Exporting Countries	values
economic decisions	personal economic decisions	World Bank
European Monetary Union	productive resources	World Trade Organization
goods		
intended consequences		
marginal benefit		

Government

American democracy	elections	intervention in conflicts between other countries
contemporary political debate	foreign policy	media reporting of election results
domestic policy	health care	ratification of the Constitution
election board policies	human rights	
election process		

Twelfth Grade

Social Studies

Key Terms and Concepts

Citizenship Rights and Responsibilities

alternative dispute resolution	emerging world problems	open meeting laws
alternative solutions	environmental issues	organ donation
appropriate criteria	environmental quality	panel discussion
arbitration	European Union	persistent world problems
arms agreements	federal	persuasive speech
causes	free flow of information	plea-bargaining
censorship of the media	freedom of information laws	proceedings
citizens	global economic interdependence	relationships
civic discussion	health	resolving conflicts
civil courts	human rights movements	resource allocation
community issue	ideals	right to a fair trial
consequences	intellectual property rights	security
contemporary world problems	international accords	social changes resulting from new technologies
criminal courts	litigation	solutions
debate	maintaining order	statue
decisions	mediation	tensions
democracy	national sovereignty	trade agreements
democratic republic	NATO	U.S. legal system
economic development		
elements		

Twelfth Grade

Social Studies

Key Terms and Concepts

Social Studies Skills and Methods

action plan	formal citation of sources	points of view
alternative solutions	formal presentations	problem
civilly	interpreting relevant data	public policy issue
concede	issues-analysis	public records
consequences	key terms	statistics and other evidence
course of action	knowledgeably	support of main ideas
decision-making body	points of agreement	visual aids
dilemma		
examples		