



## What Every Future MCA **K**indergartener Needs to Know

*Skills and work to be mastered & reviewed prior to August*

- ◆ Recognize own name in print.
- ◆ Print first name using capital letter followed by lowercase letters.
- ◆ Recognize letters in first and last name.
- ◆ Hold scissors correctly.
- ◆ Cut on curved lines.
- ◆ Recognize four basic shapes (circle, square, triangle & rectangle).
- ◆ Recognize eight basic colors.
- ◆ Tell full name, address, telephone number and birthday.
- ◆ Count to ten.
- ◆ Attend to personal needs, e.g., ask to be excused and use restroom without assistance.
- ◆ Express needs verbally.
- ◆ Use good manners, e.g., Yes Ma'am. Please. Thank you.
- ◆ Independently unpack supplies daily.

### Required Summer Reading

*What Your Kindergartener Needs to Know*, by E. D. Hirsh, Jr., and John Holdren and read from the section entitled "Familiar and Favorite Poems." If this is not possible, nursery rhymes are found in many books and are available on the Internet.



## What Every Rising MCA **First** Grader Needs to Know

*Skills and work to be mastered & reviewed prior to August*

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### English:

- ◆ Give an oral or written response to a related text in complete sentences.
- ◆ Recognize all upper/lower case letters
- ◆ Write upper and lowercase letters of the alphabet when called out randomly
- ◆ Reads Dolch, CKLA tricky words (list attached)
- ◆ Recognize rhyming words
- ◆ Read color and number words along with some rhyming families.
- ◆ Most frequent or least ambiguous spelling for all the single consonant sounds
- ◆ Know the sounds of all consonant clusters such as “fl”, “br”, and “st”
- ◆ Know the sounds of all consonant digraphs such as “sh”, “ch”, and “th”
- ◆ Know all double letter spellings such as “ss”, “ff”, and “ck”
- ◆ One spelling for the short and long vowel sounds
- ◆ Form letters using manuscript type print on lined paper

### Mathematics:

- ◆ Write numbers to 50
- ◆ Count to 100 by 1's and 10's
- ◆ Count by 5's to 50
- ◆ Reads numbers to 75
- ◆ Recognize 2 and 3 dimensional shapes
- ◆ Use a graph to answer simple questions
- ◆ Counts on from any given number
- ◆ Count and write the number of objects in a set up to 20
- ◆ Add and subtract to 10
- ◆ Read a clock face and tell time to the hour
- ◆ Identify pennies, nickels, dimes, and quarters

### Study and Work Habits:

- ◆ Follow Directions
- ◆ Tie one's own shoes

### Required Summer Reading

- *The Very Hungry Caterpillar* by Eric Carle
- *Harold and the Purple Crayon* by Crockett Johnson
- *The Giving Tree* by Shel Silverstein



## What Every Rising MCA **First** Grader Needs to Know, continued

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### Dolch, CKLA Word List

Read 100% of the following words

a	got	live	same	thing
add	had	long	see	this
all	hand	made	seem	those
am	has	make	set	three
an	he	man	shall	time
and	help	me	she	to
are	here	men	side	tree
as	him	mile	sing	up
ask	his	miss	sit	us
at	home	much	ten	use
back	hot	must	six	was
be	I	my	so	we
best	if	name	song	well
big	in	need	spell	went
black	is	next	state	were
bring	jump	no	still	what
but	it	not	stop	when
by	its	of	such	where
came	just	off	take	which
can	keep	on	tell	why
close	land	once	than	will
cut	last	one	that	wish
did	left	pic	the	with
end	let	plant	their	word
fast	life	ran	them	yes
feet	like	red	then	you
from	line	run	there	your
get	list	said	they	



**What Every Rising MCA *Second* Grader Needs to Know**  
*Skills and work to be mastered & reviewed prior to August*  
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**English:**

- ◆ Compose 4-5 sentences with spelling that can generally be read by others
- ◆ Use correct punctuation and capitalization in sentence writing
  - first word in a sentence
  - proper names
  - period to end telling sentence
  - question mark to end interrogative sentence

**Reading:**

- ◆ Read all words from the sight word list without assistance
- ◆ Read stories with comprehension on appropriate reading level

**Mathematics:**

- ◆ Memorize addition and subtraction facts to 10
- ◆ Write numbers to 100 and place in order according to value when given in scrambled order
- ◆ Tell time to the hour
- ◆ Recognize value and identify: pennies, nickels, dimes, and quarters
- ◆ Add 3 numbers (e.g.  $3+4+5=$ )
- ◆ Count by tens from a single given number (e.g. 7, 17, 27...)

**Required Summer Reading**

- ☐ *Amelia Bedila* (any title) by Peggy Parish
- ☐ *Frog and Toad* (any title) by Arnold Lobel

And, pick one of the following to read:

- ☐ *The One in the Middle is a Green Kangaroo* by Judy Blume
- ☐ *Flat Stanley* (any title) by Jeff Brown



## What Every Rising MCA **Second** Grader Needs to Know, continued

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### Expected Sight Word List for Upcoming Second Graders

a	crash	help	of	talk	where
about	children	her	off	teacher	white
after	color	here	old	tell	who
again	come	him	on	thank	why
all	could	his	once	that	will
am	day	house	one	the	with
an	did	how	open	them	won't
and	do	hurt	our	then	words
animal	down	I	out	there	write
any	ear	in	over	they	yellow
are	eat	into	people	thing	yes
as	every	is	play	think	yet
ask	favorite	it	please	this	you
at	find	jump	pretty	those	your
ate	float	just	put	though	zoo
away	fly	kick	quit	thought	
be	for	know	rain	three	
because	found	let	ran	through	
best	four	like	red	to	
big	friend	little	ride	too	
black	from	live	round	two	
blue	fun	look	run	under	
boy	funny	made	said	up	
brother	get	make	saw	us	
brown	girl	may	say	very	
but	give	me	school	want	
by	go	must	see	was	
came	going	my	she	we	
can	good	new	sister	well	
can't	green	nice	so	went	
car	had	night	some	were	
caught	has	no	soon	we're	
come	have	not	stop	what	
could	he	now	take	when	



## What Every Rising MCA **Third** Grader Needs to Know

*Skills and work to be mastered & reviewed prior to August*

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### **Reading:**

- ◆ Students have the ability to confidently decode multi-syllabic words at grade level.
- ◆ Students are able to read aloud fluently, rather than “word calling.”
- ◆ Students can read silently for thirty minutes and provide short summaries of their reading.
- ◆ Students have been exposed to a wide variety of text including fictional, expository, and practical materials.
- ◆ Students possess the ability to locate information using a variety of sources including the dictionary, thesaurus, encyclopedia, non-fictional text, and the Internet.

### **Writing:**

- ◆ Students are able to demonstrate beginning dictionary skills including proficiency at alphabetizing, understanding of guidewords, and knowledge of the uses of the dictionary. Students should have had experiences, with or without guidance, using glossaries and dictionaries to search for word meanings and to edit their writing.
- ◆ Students possess the ability to express feelings or thoughts in complete sentences.
- ◆ Students are able to compose a narrative that focuses on a single topic or event.
- ◆ Students’ narratives include some details and elaboration.
- ◆ Students are able to revise and edit their writing with guidance (if needed).
- ◆ Students write legibly. Students have been introduced to cursive writing.
- ◆ Students should know and be able to write address, phone number, full name and birthday correctly.

### **Mathematics:**

- ◆ Students should be able to recognize and write numbers up to 1,000.
- ◆ Students should demonstrate mastery of 2 and 3 digit addition and subtraction with and without regrouping.
- ◆ Students should understand the concept of multiplication. They are expected to be able to define factor and product. They should know the product of multiplication facts 0s-5s. Students should also have practiced solving simple word problems using multiplication.
- ◆ Students can mentally solve addition and subtraction facts to 18.
- ◆ Students can count multiple patterns.
- ◆ Students should comprehend the terms greater than, less than, and equal to.
- ◆ Students should be familiar with measurements, conversions, both Customary and Metric
- ◆ Students should be familiar and have had practice applying the problem solving process to solve a variety of word problems.
- ◆ Students should demonstrate mastery of interpreting graphs, charts and tables.
- ◆ Students should be able to identify fractions:  $\frac{1}{2}$ ,  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{1}{5}$ ,  $\frac{1}{6}$ ,  $\frac{1}{8}$ , and  $\frac{1}{10}$  and fractions that are equal to 1.
- ◆ Students should know coin values and be able to write amounts and money using the appropriate notation. They should be able to make equivalent sets of money, and count change at least up to \$1.00.



## What Every Rising MCA **Third** Grader Needs to Know, continued

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- ◆ Students demonstrate mastery of telling time to the minute using both analog and digital clocks. They should also know how to distinguish A.M. and P.M., and understand noon and midnight. Students should be proficient at solving problems involving elapsed time
- ◆ Students are confident in using a calendar to identify the date, day of the week, month, and year.
- ◆ Students are able to identify and/or draw polygons.
- ◆ Students understand symmetry and congruency.
- ◆ Students are able to measure perimeter in inches and determine the area of a figure.
- ◆ They are able to identify horizontal, vertical, parallel, and perpendicular lines.
- ◆ Students are able to design congruent figures and designs.

### History & Geography:

- ◆ Students are familiar with geography terms and be able to apply basic map skills.
- ◆ Have a basic understanding of Ancient Greece – culture, time period, and influences in both immediate and present day culture and life.
- ◆ Identify the United States on a map and know general locations of individual states
- ◆ Identify the continents.
- ◆ Understand purpose of a map, map key, map scale, map title.

### Science:

- ◆ Have a basic understanding of astronomy, focusing on constellations and phases of the moon.
- ◆ Know the following and how they impacted the world of science: Anton Van Leeuwenhoek, Florence Nightingale, Daniel Hale Williams and Elijah McCoy
- ◆ Have an understanding of cells and the role they play in the human body.
- ◆ Recognize the digestive system, how it works and what happens to the food we eat.
- ◆ Recognize the importance of a healthy diet.
- ◆ Have a general understanding of the life cycle of a plant from seed to seed

### Required Summer Reading

- ☐ *Classic Starts Alice in Wonderland & Through the Looking-Glass*  
retold from the Lewis Carrol Originals by Eva Mason (ISBN: 978-1-4027-5422-7)

### Recommended Summer Reading

- ☐ Any book from the *Magic Tree House* series by Mary Pope Osborn
- ☐ *Little House on the Prairie* by Laura Ingalls Wilder
- ☐ *Muggie Maggie* by Beverly Cleary



# What Every Rising MCA **Fourth** Grader Needs to Know

*Skills and work to be mastered & reviewed prior to August*  
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## Reading:

- ◆ Read silently for at least 30 minutes
- ◆ Read a variety of literature, including but not limited to *What Your fourth Grader Needs to Know*, fiction, nonfiction, legends, folklore, and biography
- ◆ Comprehend oral and silent reading.

## Writing:

- ◆ Write a beginning, middle, and end of a story.
- ◆ Use details to support topic.
- ◆ Use colorful vocabulary.
- ◆ Write in cursive.

## English:

- ◆ Know the following parts of speech: noun, pronoun, verb, adverbs, adjective, and conjunctions.
- ◆ Spell high frequency words.
- ◆ Know rules for capitalization.
- ◆ Know rules for punctuation.

## Mathematics:

- ◆ Memorize multiplication facts 0-12.
- ◆ Know measurements of standard units and equivalencies of standard metric units.
- ◆ Regroup in addition and subtraction.
- ◆ Comprehend operation needed to solve problems.

## History & Geography:

- ◆ Know North Carolina's governor
- ◆ Know information about North Carolina (government, counties, state facts, and trivia)
- ◆ Know map skills, such as cardinal directions, use of map key, etc.

## Required Summer Reading

- ☐ *The Tale of Despereaux* by Kate DiCamillo

## Recommended Summer Reading

- ☐ *The Last Holiday Concert* by Andrew Clements
- ☐ *The Miraculous Journey of Edward Tulane* by Kate DiCamillo





## What Every Rising MCA **Fifth** Grader Needs to Know

*Skills and work to be mastered & reviewed prior to August*

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### **Mathematics:**

- ◆ Recognize place value and be able to read and write numbers from the ten-thousandth place through the hundred millions place.
- ◆ Know standard and metric units of measurement.
- ◆ Understand the concepts of perimeter, area, and volume.
- ◆ Demonstrate a basic understanding of fractions.
- ◆ Solve double-digit multiplication problems.
- ◆ Identify properties of polygons and geometric solids.
- ◆ Multiplication facts 1's - 12's by memory, e.g.,  $6 \times 8 = 48$ .
- ◆ Division facts by memory, e.g.,  $48 \div 8 = 6$ .
- ◆ Add and subtract multi-digit numbers with and without decimals
- ◆ Divide using single numbers, e.g.,  $76,892 \div 4$ .
- ◆ Measure angles using a protractor.
- ◆ Plot coordinates on a grid.

### ◆ **Science:**

- ◆ Plan and conduct an experiment using the scientific procedure.
- ◆ Use simple tools to gather data, e.g., ruler, magnifier, thermometer, etc.
- ◆ Communicate the results of careful observations.
- ◆ Use data gathered to construct a reasonable explanation, e.g., a conclusion that is not simply restating the results.

### ◆ **Reading:**

- ◆ Sustain silent reading for at least 30 minutes.
- ◆ Read a variety of literature (fiction, nonfiction, legends, folklore, biography, and poetry).
- ◆ Comprehend oral and silent reading.
- ◆ Retell a story and/or chapter after reading it, recalling important details and facts.
- ◆ Use context clues to determine the meanings of unknown words.
- ◆ Cite examples or evidence from the text to responses to comprehension questions.

### ◆ **Writing:**

- ◆ Independently write a beginning, middle, and end of a story.
- ◆ Write well-developed paragraphs, using details to support topic.
- ◆ Use colorful and challenging vocabulary.
- ◆ Write in cursive.



## What Every Rising MCA **Fifth** Grader Needs to Know, continued

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### ◆ **English:**

- ◆ Know the following parts of speech: noun, pronoun, verb, adverb, adjective, and conjunction.
- ◆ Understand what a complete sentence is and identify subject and predicate, correct fragments and run-ons.
- ◆ Spell high frequency words.
- ◆ Know rules for capitalization.
- ◆ Understand how prefixes and suffixes affect word meaning.
- ◆ Identify sentence types (declarative, interrogative, imperative, exclamatory).
- ◆ Use commas correctly to separate items in a series, and to write dates and addresses.
- ◆ Use quotation marks correctly to note a quote from a text and when quoting direct speech.

### ◆ **History & Geography:**

- ◆ Use map skills such as cardinal directions, key, distance, etc.
- ◆ Be familiar with the states and capitals and basic U.S. geography.
- ◆ Use and read a world map.

### Required Summer Reading

- ☐ *Bud, Not Buddy* by Christopher Paul Curtis

### Suggested Reading

- ☐ *Hatchet* by Gary Paulsen
- ☐ *Soldier's Heart* by Gary Paulsen
- ☐ *Behind Rebel Lines* by Seymour Reit
- ☐ *Brian's Winter* by Gary Paulsen
- ☐ *Isle of the Blue Dolphins* by Scott O'Dell



# What Every Rising MCA **Sixth** Grader Needs to Know

*Skills and work to be mastered & reviewed prior to August*

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## **Mathematics**

- Immediately recalls all multiplication facts 0-12's
- Multiplies, divides, adds, and subtracts whole numbers and decimals
- Identifies basic two-dimensional shapes and three-dimensional figures
- Knows units of metric and customary measurement
- Knows patterns, relationships, and elementary algebraic representation

## **Science**

- Lists and defines steps of the scientific method
- Conducts investigations using scientific method
- Recognizes the value of science in today's society
- Describes the scientific problems facing today's scientists and those of the past
- Uses reasoning, insight, skill, and creativity to solve problems
- Recognizes science connections in current events

## **English**

- Has working knowledge of grammar skills (spelling, punctuation)
- Knows subject-verb agreement can successfully write complete sentences
- Understands verb tenses (past, present, future)
- Knows how to identify (not just define) nouns, verbs, adjectives, adverbs, conjunctions, and interjections
- Knows correct usage of phrases and clauses
- Able to use context clues, dictionary, glossary, thesaurus, and structural analysis
- Is comfortable implementing the 6 + 1 traits in writing
- Self-edits successfully
- Possesses familiarity with a variety of literature

## **History & Geography**

Is generally familiar with:

- Major world religions
- Early events of world civilizations and cultures
- Beginnings of American civilizations prior to the Civil War
- Possesses strong spatial sense and can utilize maps, globes, atlases, and other geographic tools
- Has ability to create and label various types of maps

## **Digital**

- Has reasonable typing skills (practice found at <https://www.keybr.com>)



## What Every Rising MCA **Sixth** Grader Needs to Know, continued

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### Required Summer Reading

- ☐ English: *Locomotion* by Jacqueline Woodson. Both of the following issues are the same except for the covers. Please note that *Peace, Locomotion* is NOT the same book, but is a sequel Publisher: Speak©2010. ISBN-10: 0142415529 ISBN-13: 978-0142415528. Publisher: Speak; 1<sup>st</sup> edition©2004-0439. ISBN-10: 0142401498 ISBN-13: 978-0439636155
- ☐ History: *Tiger, Tiger* by Lynne Reid Banks Laurel Leaf©2007. ISBN-10: 044042044X ISBN-13: 978-0440420446

### Recommended Summer Reading (one of the following to prepare for the space unit)

- ☐ *Team Moon: How 400,000 People Landed Apollo 11* on the Moon by Catherine Thimmesh. Houghton Mifflin Co.©2006. ISBN-10: ISBN-13: 978-0618507573
- ☐ *Almost Astronauts: 13 Women Who Dared to Dream* by Tanya Lee Stone. Candlewick Press©2009. ISBN-10: 0763636118 ISBN-13: 978-0763636111



## What Every Rising MCA **Seventh** Grader Needs to Know, continued

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### Mathematics

- Computes with fractions (add, subtract, multiply, and divide fluently).
- Solves problems using geometry.
- Knows and uses area formulas (rectangles, circles, triangles, trapezoids).
- Understands simple algebraic expressions.
- Uses graphs to analyze data.
- Understands negative numbers (placement on number line, adding, subtracting).

### Science

- Identifies parts of the scientific method.
- Uses the scientific method as a framework for developing research proposals.
- Designs and carries out a self-selected research project.
- Recognizes the value of science in today's society.
- Describes the scientific problems facing today's scientists and those of the past.
- Uses reasoning, insight, skill, and creativity to solve problems.
- Shows how scientific problem solving helps solve problems in daily life.
- Draws connections between science and other academic areas.

### English

- Writes a variety of essays (persuasive, expository, etc.)
- Writes a research paper.
- Identifies sentence types.
- Demonstrates correct usage of grammar.
- Identifies active/passive voice.
- Spells troublesome words.
- Demonstrates knowledge of Latin and Greek roots.
- Understands and identifies a variety of literature.
- Understands sayings and phrases.

### History & Geography

- Demonstrates map-reading skills, understanding of timelines.
- Is familiar with geographic terms and major landforms.
- Identifies major world religions.
- Is familiar with ancient Greek and Roman civilizations.
- Is familiar with various historical time periods.
- Is familiar with the Industrial Revolution and urbanization.
- Is familiar with the history, geography and culture of Europe and South America.
- Is familiar with working with primary source documents.



## What Every Rising MCA **Seventh** Grader Needs to Know, continued

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### Required summer reading

- ☐ *The Outsiders* by S.E. Hinton-Option A  
<https://www.amazon.com/Outsiders-S-Hinton/dp/014240733X>



# What Every Rising MCA **Eighth** Grader Needs to Know

*Skills and work to be mastered & reviewed prior to August*

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## Mathematics

- Translates between words, tables, graphs, and equations.
- Uses Pythagorean Theorem to solve problems.
- Understands concepts of probability.
- Simplifies algebraic expressions.
- Uses graphs to analyze data.
- Solves multi-step linear equations and inequalities.

## Science

- Defines the parts of the scientific method.
- Uses the scientific method as a framework for developing research proposals.
- Designs and carries out a self-selected research project.
- Generates a research paper in conjunction with a research project.
- Recognizes the value of science in today's society.
- Describes the scientific problems facing today's scientists and those of the past.
- Self-evaluates projects and those of peers by identifying strengths and weaknesses.
- Identifies the role of variables in research projects.
- Develops procedures addressing variables that might impact research.
- Shows how scientific problem solving helps solve problems in daily lives.
- Draws connections between science and other academic areas.

## English

- Writes well structured paragraphs with a unified focus and developed with evidence.
- Writes an informational essay: cause/effect and definition.
- Able to use context clues, dictionary, glossary, thesaurus, and structural analysis.
- Writes a research paper by synthesizing and evaluating data.
- Cites relevant evidence to support claims in writing and speaking.
- Identifies phrases and clauses.
- Demonstrates working knowledge of dependent and independent clauses.
- Demonstrates knowledge of Latin and Greek roots.
- Understands and identifies the characteristics of a variety of literature.
- Understands commonly used foreign sayings and phrases.
- Understands and can identify many commonly used literary devices.
- Participates civilly and productively in class discussions.

## History & Geography

- Demonstrates map-reading skills, understanding of timelines.
- Has familiarity of geographic terms and major landforms.
- Familiar with ancient Greek and Roman civilizations.
- Familiar with the Progressive Era, Depression, and World Wars I and II.
- Familiar with the history, geography and culture of Africa and Asia.

## Required Summer Reading

- *Johnny Tremain: A Story of Boston in Revolt*, Esther Forbes  
ISBN-10 : 0547614322 or ISBN-13 : 978-0547614328



## **What Every Rising MCA High School Student Needs to Know** *Foundational Knowledge and Skills for all 9<sup>th</sup>-12<sup>th</sup> Graders*

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### **Mathematics**

- Translates between words, tables, graphs, and equations.
- Uses Pythagorean Theorem to solve problems.
- Understands properties of real numbers.
- Simplifies algebraic expressions.
- Uses graphs to analyze data.
- Solves multi-step linear equations, inequalities, and functions.
- Understands quadratic equations and functions
- Understands arithmetic of rational expression

### **Science**

- Understands the scientific method as cyclical and practical.
- Uses the scientific method as a framework for developing research proposals.
- Designs and carries out a self-selected research project.
- Generates a research paper in conjunction with a research project.
- Recognizes the value of science in today's society.
- Describes the scientific problems facing today's scientists and those of the past.
- Draws connections between science and other academic areas.
- Demonstrates basic content knowledge in chemistry, physics, biology, geology, astronomy and environmental science.

### **English**

- Writes a variety of expository essays, emphasizing persuasion.
- Understands and applies the canons of rhetoric.
- Writes a research paper by synthesizing and evaluating data.
- Uses English grammar competently, including phrases and clauses.
- Demonstrates knowledge of Latin and Greek roots.
- Reads broadly and deeply; understands and identifies a variety of literature and informational text.
- Understands and uses commonly used foreign sayings and phrases.

### **History & Geography**

- Demonstrates map-reading skills, understanding of timelines.
- Has familiarity of geographic terms and major landforms.
- Demonstrates familiarity with the history of Western Civilization.
- Demonstrates familiarity with American history, civics, and government.
- Demonstrates an awareness of the broad history, geography and culture of Africa and Asia.
- Demonstrates geo-political awareness and an understanding of current events.





## What Every Rising MCA **Ninth** Grader Needs to Read

### Required Summer Reading

- ☐ *Percy Jackson's Greek Heroes* by Rick Riordan (ISBN-13: 978-1484776438)



## What Every Rising MCA **Tenth** Grader Needs to Read

### Required Summer Reading

- ☐ *Tristan and Iseult* translated by Hilaire Belloc.  
You can find an online copy [here free of charge](#).  
You can purchase a printed version [here](#).  
You can get a free [Kindle version here](#).



## What Every Rising MCA **Eleventh** Grader Needs to Read

### Required Summer Reading

*An Occurrence at Owl Creek Bridge* by Ambrose Bierce



## What Every Rising MCA **Twelfth** Grader Needs to Read

### Required Summer Reading

- 1984 by George Orwell