Manchester Academic Charter School
Eighth Grade
Priority Standards and Content for Mastery
English-Language Arts

8th grade

Analyzing Literature

1. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences, conclusions, and/or generalizations drawn from the text.
2. Determine a theme or central idea of a text and analyze its development over the course of the text, including its relationship to the characters, setting, and plot; provide an objective summary of the text.
3. Analyze how particular lines of dialogue or incidents in a story or drama propel the action, reveal aspects of a character, or provoke a decision.
4. Analyze how differences in the points of view of the characters and the audience or reader (e.g., created through the use of dramatic irony) create such effects as suspense or humor.
5. Analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.
6. Analyze how a modern work of fiction draws on themes, patterns of events, or character types from myths and traditional stories, including describing how the material is rendered new.

Analyzing Informational Text

7. Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences, conclusions, and/or generalizations drawn from the text.
8. Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.
9. Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.
10. Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is sound and the evidence is relevant and sufficient; recognize when irrelevant evidence is introduced.
11. Analyze a case in which two or more texts provide conflicting information on the same topic and identify where the texts disagree on matters of fact or interpretation.

Writing

12. Write arguments to support claims.
   a. Introduce and state an opinion on a topic
   b. Acknowledge and distinguish the claim(s) with logical reasoning and relevant evidence, using accurate, credible sources and demonstrating an understanding of the topic
   c. Organize the claim(s) with clear reasons and evidence clearly
      i. clarify relationships among claim(s), counterclaims, reasons and evidence by using words, phrases and clauses to create cohesion
      ii. provide a concluding statement or section that follows from and supports the argument presented
   d. Write with an awareness of the stylistic aspects of composition
i. use precise language and domain-specific vocabulary to inform about or explain the topic
ii. use sentences of varying lengths and complexities
iii. create tone and voice through precise language
iv. establish and maintain a formal style
13. Write informative/explanatory texts to examine a topic and convey ideas, concepts and information clearly.
   a. Identify and introduce the topic clearly, including a preview of what is to follow
   b. Develop and analyze the topic with relevant, well-chosen facts, definitions, concrete details, quotations or other information and examples; include graphics and multimedia when useful to aiding comprehension
   c. Organize ideas, concepts and information into broader categories
      i. use appropriate and varied transitions to create cohesion and clarify the relationships among idea and concepts
      ii. provide a concluding statement or section; include formatting when useful to aiding comprehension
   b. Write with an awareness of the stylistic aspects of composition
      i. use precise language and domain-specific vocabulary to inform about or explain the topic
      ii. use sentences of varying lengths and complexities
      iii. create tone and voice through precise language
      iv. establish and maintain a formal style
14. Write narratives to develop real or imagined experiences or events.
   a. Engage and orient the reader by establishing a context and point of view and introducing a narrator and/or characters
   b. Use narrative techniques such as dialogue, description, reflection and pacing, to develop experiences, events, and/or characters; use precise words and phrases, relevant descriptive details, and sensory language to capture the action and convey experiences and events
   c. Organize an event sequence that unfolds naturally and logically
      i. using a variety of transition words, phrases and clauses to convey sequence and signal shifts from one time frame or setting to another
      ii. provide a conclusion that follows from and reflects on the narrated experience and events
   d. Write with an awareness of the stylistic aspects of writing
      i. Use verbs in the active and passive voice and in the conditional and subjunctive mood to achieve particular effect
      ii. Use sentences of varying lengths and complexities
      iii. Create tone and voice through precise language
Language

15. Demonstrate command of the conventions of standard English grammar, usage, capitalization, punctuation and spelling.
   a. Explain the function of verbals (i.e., gerunds, participles, and infinitives) in general and their function in particular sentences
   b. Form and use verbs in the active and passive voice
   c. Form and use verbs in the indicative, imperative, interrogative, conditional and subjunctive mood
   d. Recognize and correct inappropriate shifts in verb voice and mood
   e. Place phrases and clauses within a sentence, recognizing and correcting misplaced and dangling modifiers
   f. Recognize and correct inappropriate shifts in pronoun number and person
   g. Recognize and correct vague pronouns (i.e., ones with unclear or ambiguous antecedents)
   h. Recognize and correct inappropriate shifts in verb tense
   i. Produce complete sentences, recognizing and correcting inappropriate fragments and run-on sentences
   j. Correctly use frequently confused words (e.g., too, too, two; there, their, they're)
   k. Ensure subject-verb and pronoun agreement
   l. Spell correctly

   absence          dessert          necessary
   accommodate      desperate        occurrence
   analysis         dissatisfied    permanence
   attendance       extraordinary   physician
   believe          fascinating     prairie
   bureau           foreign         sergeant
   capitol          guarantee       souvenir
   colonel          hygiene         straight
   committee        independence   technique
   correspondence   laboratory      temporary
   counterfeit      library         vacuum
   courageous       lightning       whether
   curiosity        maintenance
   defendant

   m. Use punctuation (i.e., comma, ellipsis, hyphens, colons, italics and dash) to indicate a pause or break
   n. Use an ellipsis to indicate an omission
   o. Use punctuation (i.e., commas, parentheses, and dashes) to set off nonrestrictive/parenthetical elements
   p. Use punctuation to separate items in a series
   q. Identify and correctly use parallelism
Production of Writing

17. With guidance and support from peers and adults
   i. develop and strengthen writing as needed by planning, revising and
      editing rewriting or trying a new approach focusing on how well purpose
      and audience have been address
   ii. Use technology, including the Internet to produce and publish writing and
      present the relationship between information and ideas effectively as well
      as to interact and collaborate with others

Vocabulary

18. Demonstrate understanding of figurative language, word relationships, and nuances in
    word meanings.
   a. Interpret figures of speech (e.g. verbal irony, puns) in context. (See Appendix
      B)
   b. Use the relationship between particular words to better understand each of the
      words.
   c. Distinguish among the connotations (associations) of words with similar
      denotations (definitions) (e.g., bullheaded, willful, firm, persistent, resolute).

19. Determine or clarify the meaning of unknown and multiple-meaning words or phrases
    based on grade 8 reading and content, choosing flexibly from a range of strategies.
   a. Use context (e.g., the overall meaning of a sentence or paragraph; a word's
      position or function in a sentence) as a clue to the meaning of a word or phrase.
   b. Use common, grade-appropriate Greek or Latin affixes and roots as clues to the
      meaning of a word (e.g., precede, recede, secede).

| aequus      | jinguo | pugno |
| ago, actus | lego, lectum | punctum |
| anthropos  | locus | rego |
| ars        | loquor | sanguis |
| brevis     | medius | satis |
| canto      | mission | scio |
| caput      | morior | solus |
| clino      | nego | sonus |
| cognito    | nihil | sophos |
| copia      | occido | spiritus |
| credo      | pathos | totus |
| culpa      | pendo | tractum |
| dominus    | per | uras |
| duco       | phobos | vacuus |
| fido       | plenus | verbum |
| fundo.fusum | positum | verto |
| genus      | porto | via |
| holos      | possum |
Research

20. Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.

Speaking

21. Present claims and findings
   a. emphasizing salient points in a focused, coherent manner
   b. with relevant evidence, sound, valid reasoning, and well-chosen details
   c. use appropriate eye contact, adequate volume and clear pronunciation
Mathematics

8th grade

The Number System
Rational and Irrational Numbers

1. Determine whether a number is rational or irrational. For rational numbers, show that the
decimal expansion terminates or repeats (limit repeating decimals to thousandth).
2. Estimate the value of irrational numbers without a calculator (limit whole number
radical to less than 144).
3. Locate/identify rational and irrational numbers at their appropriate locations on a
number line.

Expressions and Equations
Expressions and Equations with Radicals and Integer Exponents

4. Apply one or more properties of integer exponents to generate equivalent numerical
expressions without a calculator (with final answers expressed in exponential form with
positive exponents). Properties will be provided.
5. Perform operations with numbers expressed in scientific notation, including problems
where both decimal and scientific notation are used. Express answers in scientific
notation and choose units of appropriate size for measurements of very large or very
small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific
notation that has been generated by technology (e.g., interpret 4.7EE9 displayed on a
calculator as $4.7 \times 10^9$).
6. Graph proportional relationships, interpreting the unit rate as the slope of the graph.
Compare two different proportional relationships represented in different ways.
7. Derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for a
line intercepting the vertical axis at $b$.
8. Write and identify linear equations in one variable with one solution, infinitely many
solutions, or no solutions. Show which of these possibilities is the case by successively
transforming the given equation into simpler forms until an equivalent equation of the
form $x = a$, $a = a$, or $a = b$ results (where $a$ and $b$ are different numbers).
9. Solve systems of two linear equations in two variables algebraically and estimate
solutions by graphing the equations. Solve simple cases by inspection.
10. Solve real-world and mathematical problems leading to two linear equations in two
variables.

Functions
Analyze, Interpret and Use Functions

11. Determine whether a relation is a function.
12. Compare properties of two functions, each represented in a different way (i.e.,
algebraically, graphically, numerically in tables, or by verbal descriptions).
13. Construct a function to model a linear relationship between two quantities. Determine the
rate of change and initial value of the function from a description of a relationship or from
two $(x, y)$ values, including reading these from a table or from a graph. Interpret the rate
of change and initial value of a linear function in terms of the situation it models and in terms of its graph or a table of values.

14. Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch or determine a graph that exhibits the qualitative features of a function that has been described verbally.

Geometry
Geometric Transformations

15. Identify and apply properties of rotation, reflections, and translations.
16. Apply the converse of the Pythagorean theorem to show a triangle is a right triangle.
17. Apply formulas for the volumes of cones, cylinders, and spheres to solve real-world and mathematical problems. Formulas will be provided.

Measurement and Data
Conversions

18. Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative correlation, linear association, and nonlinear association.
19. Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.
20. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies, calculated for rows or columns to describe possible associations between the two variables.
Science

8th grade

The Nature of Science

1. Distinguish between a scientific theory and an opinion, explain how a theory is supported with evidence, or how new data/information may change existing theories and practices.

2. Describe the positive and negative intended and unintended, effects of specific scientific results or technological developments (e.g., air/space travel, genetic engineering, nuclear fission/fusion, artificial intelligence, lasers, organ transplants).

3. Examine the systems changing over time, identifying the possible variables causing this change, and drawing inferences about how these variables affect this change.

4. Use evidence, observations, or a variety of scales (e.g., mass, distance, volume, temperature) to describe relationships.

5. Use space/time relationships, define concepts operationally, raise testable questions, or formulate hypotheses.

6. Describe the appropriate use of instruments and scales to accurately and safely measure time, mass, distance, volume, or temperature under a variety of conditions.

7. Describe a system (e.g., watershed, circulatory system, heating system, agricultural system) as a group of related parts with specific roles that work together to achieve an observed result.

8. Distinguish between open loop (e.g., energy flow, food web) and closed loop (e.g., material in the nitrogen and carbon cycles, closed-switch) systems.

9. Describe how scientists use models to explore relationships in natural systems (e.g., an ecosystem, river system, the solar system).
   a. Describe how engineers use models to develop new and improved technologies to solve problems.

10. Identify and describe patterns as repeated processes or recurring elements in human-made systems (e.g., trusses, hub-and-spoke system in communications and transportation systems, feedback controls in regulated systems).

Biological Sciences

11. Explain the flow of energy through an ecosystem (e.g., food chains, food webs)

12. Describe the structures of living things that help them function effectively in specific ways (e.g., adaptations, characteristics).

13. Recognize that the gene is the basic unit of inheritance, that there are dominant and recessive genes, and that traits are inherited.
Physical Sciences: Physics and Chemistry

14. Describe forces acting on objects (e.g., friction, gravity, balanced versus unbalanced); velocity and speed; density and bouyancy
15. Explain how energy is transferred from one place to another through convection, conduction, or radiation.
16. Distinguish among forms of energy (e.g., electrical, mechanical, chemical, light, sound, nuclear) and sources of energy (i.e., renewable and nonrenewable energy).
17. Explore electricity and magnetism through charge of electrons, static electricity, lightning, flowing electricity.
18. Explore Earth’s magnetism waves and electromagnetic radiation and waves (sound, light and gamma rays)
19. Chemistry of food and respiration through photosynthesis and energy in animals through respiration.

Earth and Space Sciences

20. Explain the rock cycle as changes in the solid earth and rock types (igneous – granite, basalt, obsidian, pumice; sedimentary – limestone, sandstone, shale, coal; and metamorphic – slate, quartzite, marble, gneiss).
21. Distinguish among different water systems (e.g., wetland systems, ocean systems, river systems, watersheds) and describe their relationships to each other as well as to landforms.
22. Describe the Sun as the major source of energy that impacts the environment
23. Explain the differences among elements, compounds, and mixtures.
24. Describe patterns of earth’s movements (i.e., rotation and revolution) in relation to the moon and sun (i.e., phases, eclipses, and tides).

Famous Scientists

25. Albert Einstein
26. Dorothy Hodgkin
27. James Maxwell
28. Charles Steinmetz
Social Studies

8th grade

Civics

1. Identify the sources of the rule of law. Law and government.
2. Analyze the principles and ideals that shaped local, Pennsylvania and national governments.
   a. Liberty/Freedom
   b. Democracy
   c. Justice
   d. Equality
3. Summarize the basic principles and ideals within documents and the roles played by the framers as found in significant documents
   a. Declaration of Independence
   b. United States Constitution
   c. Bill of Rights
   d. Pennsylvania Constitution
   e. Individual Rights
4. Analyze how political symbols are used by the media and leaders to influence public opinion.
5. Summarize the role of the citizens in terms of rights and responsibilities in different government systems.
6. Explain the various judicial levels of the U.S. and state.
7. Explain the role of interest groups in the federal government process.
8. Describe the influence of mass media on government.

Geography

9. Explain and illustrate how geographic tools are used to organize and interpret information about people, places and environments in America.
   a. Physical features: mountain ranges, rivers, peaks
   b. Cities
   c. Population
   d. Regions

United States History

10. Examine the role groups and individuals played in the social, political cultural and economic development of the United States.
11. Evaluate the industrialization and urbanization of the Reconstruction era.
12. Analyze the reform efforts of individuals and groups.
    a. Jane Addams
    b. Ida B. Wells
    c. Booker T. Washington
13. Summarize and compare how continuity and change have impacted U.S. history.
   a. Belief systems and religions
   b. Commerce and industry
   c. Technology
   d. Politics and government
   e. Physical and human geography
   f. Social organizations

14. Examine how conflict and cooperation among groups and organizations have impacted the growth and development of the U.S.
   a. Ethnicity and race
   b. Working conditions
   c. Immigration
   d. Military conflict
   e. Economic stability

15. Examine how America became a world power through the expansion of the navy, Spanish-American War and the Panama Canal.

16. Examine the causes and effects of
   a. World War I
   b. World War II
   c. The Cold War
   d. Vietnam War
   e. War in Iraq

17. Examine America in the 1920s through a variety of perspectives and events that lead to the Great Depression.

18. Examine the causes and effects of the Civil Rights Movement.

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**National Social Studies Themes**

**Enduring Understandings**

**Culture**

Human beings create, learn, and adapt culture. Cultures are dynamic systems of beliefs, values, and traditions that exhibit both commonalities and differences. Understanding culture helps us understand ourselves and others.

**Time, Continuity, and Change**

Human beings seek to understand their historic roots and to locate themselves in time. Knowing what things were like in the past and how things change and develop helps us answer important questions about our current condition.

**People, Places, and Environment**

Today’s students are aware of the world beyond their personal locations. As students study this content, they create their spatial views and geographic perspectives. Social, cultural, economic, and civic demands require such knowledge to make informed and critical decisions about relationships between people and their environment.
Individual Development and Identity

Personal identity is shaped by one's culture, by groups, and by institutional influences. Examination of various forms of human behavior enhances understanding of the relationship between social norms and emerging personal identities, the relationships between social processes that influence identity formation, and the ethical principles underlying individual action.

Individuals, Groups, and Institutions

Institutions exert enormous influence over us. Institutions are organizations that embody and promote the core social values of their members. It is important for students to know how institutions are formed, what controls and influences them, how they control and influence individuals and culture, and how institutions can be maintained or changed.

Power, Authority, and Governance

Understanding the development of structures of power, authority, and governance and their evolving functions is essential for the emergence of civic competence.

Production, Distribution, and Consumption

Decisions about exchange, trade, and economic policy and well-being are global in scope. The role of government in policy making varies over time and from place to place. Systematic study of an interdependent world economy and the role of technology in economic decision making is essential.

Science, Technology, and Society

Technology is as old as the first crude tool invented by prehistoric humans. Our modern life would be impossible without technology and the science that supports it. Today's technology forms the basis for many difficult social choices.

Global Connections

The realities of global interdependence require understanding of the increasingly important and diverse global connections among societies. Persisting and emerging global issues require solutions.

Civic Ideals and Practices

All people have a stake in examining civic ideals and practices across time and in diverse societies, as well as in determining how to close the gap between present practices and the ideals on which our democratic republic is based. An understanding of civic ideals and the practice of citizenship is critical to full participation in society.
Appendix A
Books and Stories Suggestions

Poems

Buffalo Bill’s, cummings
Chicago, Sandburg
Do Not Go Gentle into That Good Night, Thomas
How do I love thee?, Browining
I dwell in possibility, Apparently with no surprise, Dickinson
Mending Wall; The Gift Outright, Frost
Polonius’s Speech, Shakespeare
Sonnet 18, “Shall I compare thee” , Shakespeare
Theme for English B, Hughes
We Real Cool, Brooks
Nothing Gold Can Stay, Frost

Novels

*The Outsiders*
*Roll of Thunder, Hear My Cry*
*Warriors Don’t Cry*
*Monster*

Fiction, Nonfiction and Drama

“The Bet”
“Dr. Heidegger’s Experiment”
“God Sees the Truth But Waits”
“An Honest Thief”
“The Open Boat”
“Ask not what your country can do for you”
“I have a dream”; “Letter to Birmingham Jail”
“Death of a Pig”
“The Marginal World”
Selections of *I Know Why a Caged Bird Sings* ( chapter 2 and 16)
*Twelfth Night*
Appendix B
Foreign Phrases Commonly Used in English

au revoir - goodbye, until we see each other again
avant-garde - a group developing new or experimental concepts, a vanguard
bête noire - a person or thing especially dreaded and avoided [literally, “black beast”]
c’est la vie - that’s life, that’s how things happen
carte blanche - full discretionary power [literally, “blank page”]
cause célèbre - a very controversial issue that generates fervent public debate [literally, a “celebrated case”]
coup de grâce - a decisive finishing blow
coup d’état - overthrow of a government by a group
déjà vu - something overly familiar [literally, “already seen”]
enfant terrible - one whose remarks or actions cause embarrassment, or someone strikingly unconventional [literally, “terrible child”]
fait accompli - an accomplished fact, presumably irreversible faux pas - a social blunder [literally, “false step”]
Madame, Mademoiselle, Monsieur - Mrs., Miss, Mr.
merci - thank you
pièce de résistance - the principal part of the meal, a showpiece item
raison d’être - reason for being
savoir-faire - the ability to say or do the right thing in any situation, polished sureness in society [literally, “to know (how) to do”]
tête-à-tête - private conversation between two people [literally, “head to head”]