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

4th grade

Foundational Skills

1. Read with sufficient accuracy and fluency to support comprehension.
   a. Read on-level text with purpose and understanding
   b. Read grade-level prose and poetry orally with accuracy, appropriate rate
      and expression on successive readings
   c. Use context to confirm or self-correct word recognition and understanding,
      rereading as necessary

   Analyze Literature

2. Cite relevant details from the text to support what the text says explicitly and
   make inferences.
3. Determine the theme of text from details in the text; summarize the text.
4. Describe in depth a character, setting or event in a story or drama, drawing on
   specific details in the text.
5. Compare and contrast an event or topic told from two different points of view (1st
   and 3rd).
6. Compare and contrast similar themes, topics and patterns of events in literature
   including texts from different cultures.

   Analyze Informational text

7. Determine the main idea of a text and explain how it is supported by key details;
   summarize the text.
8. Explain events, procedures, ideas or concepts in a text including what happened
   and why, based on specific information in the text.
9. Compare and contrast an event or topic told from two different points of view;
   integrate information to demonstrate understanding of that topic.
10. Use text structure to interpret information and explain how the information
    contributes to an understanding of text in which it appears.
11. Explain how an author used reasons and evidence to support particular points in
    a text.

   Text-Dependent Analysis

12. Draw evidence from literary or informational texts to support analysis, reflection
    and/or research.

   Writing

13. Write opinion pieces on topics or texts
   a. Introduce the topic and state an opinion on the topic
b. Provide reasons that are supported by facts and details
c. Create an organizational structure that includes
   i. related ideas grouped to support the writer’s purpose
   ii. linked in a logical order
   iii. with a concluding statement or section related to the opinion
d. Choose words and phrases to convey ideas precisely

14. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
   a. Identify and introduce the topic clearly
   b. Develop the topic with facts, definitions, concrete details, quotations or other information and examples related to the topic; include illustrations and multimedia when useful to aiding comprehension
   c. Group related information in paragraphs and sections
      i. linking ideas within categories of information using words and phrases
      ii. provide a concluding statement or section
      iii. include formatting when useful to aiding comprehension
   d. Use precise language and domain-specific vocabulary to inform about or explain the topic

15. Write narratives to develop real or imagined experiences or events
   a. Orient the reader by establishing a situation and introducing a narrator and/or characters
   b. Use dialogue and descriptions to develop experiences and events or show the responses of characters to situations; use concrete words and phrases and sensory details to convey experiences and events precisely
   c. Organize an event sequence that unfolds naturally, using a variety of transitional words and phrases to manage the sequences of events; provide a conclusion that follows from the narrated experiences and events

***Students should be able to write at least five paragraphs.***
    (Introduction, three body paragraphs and conclusion)

Language

16. Demonstrate a grade-appropriate command of the conventions of standard English grammar, usage, capitalization, punctuation and spelling.
   a. Use relative pronouns (e.g., who, whose, whom, which, that) and relative adverbs (e.g., where, when why)
   b. Form and use progressive verb tenses (e.g., I was walking, I am walking, I will be walking)
   c. Use modal auxiliaries (e.g., can, may, must) to convey various conditions
   d. Order adjectives within sentences according to conventional patterns (e.g., a small red bag rather than a red small bag)
e. Form and use prepositional phrases
f. Produce sentences, recognizing and correcting inappropriate fragments and run-on sentences
g. Correctly use frequently confused words (e.g., to, too, two; there, their, they’re)
h. Ensure subject-verb and pronoun-antecedent agreement
i. Use correct capitalization
j. Use commas and quotation marks to mark direct speech and quotations from a text
k. Use a comma before a coordinating conjunction in a compound sentence
l. Use underlining or italics for book titles
m. Spell grade-appropriate words correctly

Production of Writing

16. With guidance and support from peers and adults,
   a. develop and strengthen writing as needed by planning
   b. revising and editing and use technology, including the Internet to produce and publish writing as well as to interact and collaborate with others
   c. demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting (30 minutes).

Vocabulary

17. Demonstrate understandings of figurative language, word relationships and nuances in word meanings. (See Appendix B)
   a. Explain the meaning of similes and metaphors in context
   b. Recognize and explain the meaning of common idioms, adages and proverbs
   c. Demonstrate understanding of words by relating them to their antonyms and synonyms

18. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.
   a. Use context as a clue to the meaning of a word or phrase
   b. Use common, grade-appropriate Greek and Latin affixes and roots as clues to the meaning of a word
      Im, in En -ful
      Non Pre -able
      Mis -ily -ment
   c. Determine the meaning of general academic and domain-specific words or phrases used in a text
Research

19. Conduct short research projects that build knowledge about a topic through investigation of different aspects of a topic.
   a. Document sources in a rudimentary bibliography

Speaking

20. Report on a topic or text, tell a story or recount an experience
   i. in an organized manner
   ii. using relevant, descriptive details to support main ideas or themes
   iii. speak clearly with adequate volume, appropriate pacing and clear pronunciation
Mathematics

4th grade

Numbers and Operation
Place-Value and Base Ten

1. Demonstrate an understanding that in a multi-digit whole number (through 1,000,000), a digit in one place represents ten times what it represents in the place to its right.
2. Read and write whole numbers in expanded, standard and word form through 1,000,000.
3. Compare a two multi-digit number through 1,000,000 based on meanings of the digits in each place, using >, =, and < symbols; round multi-digit whole numbers to any place.
4. Add and subtract multi-digit whole numbers (limit sums and subtrahends up to and including 1,000,000).
5. Multiply a whole number of up to four digits by a one-digit whole number and multiply 2 two-digit numbers; Divide up to four-digit dividends by one-digit divisors with answers written as whole-numbers quotients and remainders.

Numbers and Operations
Fractions

6. Recognize and generate equivalent fractions; Compare two fractions with different numerators and different denominators (denominators limited to 2,3,4,5,6,8,10,12 and 100) using the symbols >, =, < and justify the conclusions.
7. Add and subtract fractions and mixed numbers with a common denominator (denominators limited to 2,3,4,5,6,8,10,12, and 100; answers do not need to be simplified and no improper fractions in final answer).
8. Solve word problems involving addition and subtractions of fractions referring to the same whole or set and having like denominators (denominators limited to 2,3,4,5,6,8,10,12 and 100).
   a. Add two fractions with respective denominators 10 and 100
9. Multiply a whole number by unit fraction (denominators limited to 2,3,4,5,6,8,10,12 and 100 and final answers do not need to be simplified or written as a mixed number).
   a. Solve word problems involving multiplication of a whole number by a fraction (denominators limited to 2,3,4,5,6,8,10, 12 and 100).
10. Use decimal notation for fractions with denominators 10 to 100
    a. Compare two decimals to hundredths using the symbols >, =, or < and justify the conclusions.
Operations and Algebraic Thinking

Four Operations

12. Solve multi-step word problems posed with whole numbers using the four operations. Answers will be either whole numbers or have remainders that must be interpreted yielding a final answer that is a whole number. Represent these problems using equations with a symbol or letter standing for the unknown quantity.

13. Identify the missing symbol (+, -, x, ÷, =, <, and >) that makes a number sentence true (single-digit divisor only).

14. Find all factor pairs for a whole number in the interval 1 through 100
   a. Recognize that a whole number is a multiple of each of its factors.
   b. Determine whether a given whole number in the interval 1 through 100 is a multiple of a given one-digit number.
   c. Determine whether a given whole number in the interval 1 through 100 is prime or composite.

15. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.
   a. Determine the missing elements in a function table (limit to +, -, or and to whole numbers or money).
   b. Determine the rule for a function given a table (limit to +, , or = and to whole numbers).

16. Determine the missing elements in a function table (limit to +, -, or and to whole numbers or money).

17. Determine the rule for a function given a table (limit to +, , or = and to whole numbers).

Geometry

Lines and Angles

15. Draw points, lines, line segments, rays, angles (right, acute and obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

16. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absences of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

17. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into mirroring parts. Identify line-symmetric figures and draw lines of symmetry (up to two lines of symmetry).

Measurement and Data

Represent and Interpret Data

18. Know relative sizes of measurement units within one system of units including standard units (in., ft, yd, mi; oz., lb; and c, pt, qt, gal), metric units (cm, m, kg; g,
kg; and mL, L), and time (sec, min, hr, day, wk, mo, and yr). Within a single system of measurement, express measurements in a larger unit of a smaller unit. A table of equivalencies will be provided.

19. Use the four operations to solve word problems involving distances, interval of time (such as elapsed time), liquid volumes, masses of objects; money, including problems involving simple fractions or decimals; and problems that require expressing measurements given in a larger unit in terms of a smaller unit.
   a. Identify time (analog or digital) as the amount of minutes before or after the hour
   b. Make a line plot to display a data set of measurements in fraction of a unit (e.g., interval of \( \frac{1}{2}, \frac{1}{4}, \) or \( \frac{1}{6} \))
   c. Measure angles in whole-number degrees using a protractor. With the aid of a protractor, sketch angles of a specified measure
Science

4th grade

The Nature of Science

1. Distinguish between a scientific fact and opinion, providing clear expectations that connect observations and results (e.g., scientific fact can be supported by making observations).
2. Describe relative size, distance or motion.
3. Design and describe an investigation (a fair test) to test one variable.
4. Observe a natural phenomenon (e.g., weather changes, length of daylight/night, movement of shadows, animal migrations, growth of plants), record observations, and then make a prediction based on those observations.
5. Identify appropriate tools or instruments for specific tasks, and describe the information they provide (i.e., measuring [length-ruler; mass-balance scale, volume- beaker, temperature- thermometer; making observations: hand lens, binoculars, telescope]).
6. Use appropriate, simple modeling tools and techniques to describe or illustrate a system (e.g., two cans and string to model a communication system, terrarium to model an ecosystem).
7. Explain how specific adaptations can help a living organism survive (e.g., protective coloration, mimicry, leaf sizes and shapes, ability to catch or retain water).
8. Identify basic cloud types (i.e., cirrus, cumulus, stratus and cumulonimbus) and make connections to basic elements of weather (e.g., changes in temperature, precipitation).
9. Identify weather patterns from data charts or graphs of the data (e.g., temperature, wind direction, wind speed, cloud types, precipitation).

Biological Sciences

10. Describe common functions living things share to help them function in a specific environment
   a. Models: Construct and interpret models and diagrams of various animal and plant life cycles
11. Recognize that reproduction is necessary for the continuation of life.
12. Describe plant and animal adaptations that are important to survival.
13. Describe the circulatory and respiratory systems.

Chemistry

14. Demonstrate that materials are composed of parts that are too small to be seen without magnification. Explore atoms and their charges.
15. Demonstrate the conservation of mass during physical changes such as melting or freezing
   a. Models: Use models to demonstrate the physical changes as water goes from liquid to ice and form liquid to vapor
   b. Explore the properties of matter: mass, volume, density and vacuum
16. Recognize that combining two or more substances may make new materials with different properties. Explore elements and solutions.

   **Physics**

17. Explain how an object’s change in motion can be observed and measured.
18. Examine electricity and classify the types of currents, circuits and conductors and insulators.

   **Earth and Space Sciences**

19. Recognize Earth’s different water resources, including both fresh and saltwater. Describe phase changes in the forms of water on Earth.
20. Explore the Earth’s layers and natural disasters.
   a. Explain how mountains are formed
   b. Rock types
21. Identify planets in our solar system and their basic characteristics. Describe the earth’s place in the solar system that includes the sun (a star), planets and many moons. Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars.
22. Explain how the water cycle is connected to the weather.

   **Famous Scientist**

23. Benjamin Banneker
24. Elizabeth Blackwell
25. Charles Drew
26. Michael Faraday
Social Studies

4th grade

Civics

1. Explain rules and laws for the classroom, school, community and state.
   a. Identify individual rights and needs and the rights and needs of others in the classroom, school and community.

Geography

2. Identify mountains and mountain ranges:
   a. Andes, Rockies, Appalachians, Himalayas and Urals, Atlas Mountains and Alps
   b. Everest, McKinley, Aconcague, Mont Blanc, Kilimanjaro

United States History

3. Explain the main ideas of the Declaration of Independence and the Constitution.
4. Identify the early presidents:
   a. George Washington
   b. John Adams
   c. Thomas Jefferson
   d. James Madison
   e. James Monroe
   f. John Quincy Adams
   g. Andrew Jackson
5. Explain the principles and ideals shaping local and state government.
   a. Liberty/Freedom
   b. Democracy
   c. Justice
   d. Equality
6. Identify state symbols, national symbols and national holidays.
   a. National capitol in D.C.
   b. Spirit of ’76 painting
   c. White House and Capitol Building
   d. Great Seal of the United States
7. Describe the roles of leadership and public service in school, community, state and nation.
8. Describe the American Revolution through the French and Indian Wars. Explain the causes for the revolution.
9. Distinguish between fact and opinion from multiple points of views, and primary sources as related to historical events.
10. Differentiate common characteristics of the social, political, cultural and economic groups from Pennsylvania.
11. Distinguish between conflict and cooperation among groups and organizations that impacted the history and development of the United States.
   a. Ethnicity and race
   b. Working conditions
   c. Immigration
   d. Military conflict
   e. Economic stability

World History

12. Explore Europe in the Middle Ages through geography, culture and development of the Christian Church.
13. Explore the spread of Islam and the “Holy Wars.”
Appendix A
Books and Stories Suggestions

Poems

“Afternoon on a Hill”, Millay
“Clarence”, Silverstein
“Clouds”, Rossetti
“Concord Hymn”, Emerson
“Dreams”, Hughes
“the drum”, Giovanni
“Fog”, Sandburg
“George Washington”, Benet
“Humanity”, Stuckey
“Life Doesn’t Frighten Me”, Angelou
“Monday’s Child Is Fair of Face”, (traditional)
“Paul Revere’s Ride”, Longfellow
“The Rhinoceros”, Nash
“Things”, Greenfield
“A Tragic Story”, Thackeray

Novels

Firegirl, Abott
One and Only Ivan, Applegate
Tales of Desperaux, DiCamillo
Esperanza Rising, Ryan

Stories

The Fire on the Mountain (an Ethiopian folktale)
from Gulliver’s Travels: Gulliver in Lilliput and Brobdingnag (Jonathan Swift)
The Legend of Sleepy Hollow and Rip Van Winkle (Washington Irving)
The Magic Brocade (a Chinese folktale)
Pollyanna (Eleanor Porter)
Robin Hood
St. George and the Dragon

Myths and Mythical Characters

Legends of King Arthur and the Knights of the Round Table
How Arthur Became King
The Sword in the Stone
The Sword Excalibur
Guinevere
Merlin and the Lady of the Lake
Sir Lancelot
Appendix B

Phrases and Sayings

An ounce of prevention is worth a pound of cure.
As the crow flies
Beauty is only skin deep.
The bigger they are, the harder they fall.
Birds of a feather flock together.
Blow hot and cold
Break the ice
Bull in a china shop
Bury the hatchet
Can’t hold a candle to
Don’t count your chickens before they hatch.
Don’t put all your eggs in one basket.
Etc.
Go to pot
Half a loaf is better than none.
Haste makes waste.
Laugh and the world laughs with you.
Lightning never strikes twice in the same place.
Live and let live.
Make ends meet.
Make hay while the sun shines.
Money burning a hole in your pocket
Once in a blue moon
One picture is worth a thousand words.
On the warpath
RSVP
Run-of-the-mill
Seeing is believing.
Shipshape
Through thick and thin
Timbuktu
Two wrongs don’t make a right.
When it rains, it pours.
You can lead a horse to water, but you can’t make it drink.