



# Family Resource Guide



## EIGHTH GRADE







# Welcome to Eighth Grade!

## Purpose of the Guide

Students in Charlotte-Mecklenburg Schools follow the state of North Carolina's expectations for what every student will know and be able to do by the end of their current grade level. This guide is designed to help you support your student by understanding those expectations, provide everyday activities to reinforce their learning at home and partner with their teachers throughout the school year.

## This guide includes...



### Key Skills for Reading and Math

Understand the most important things your child should know and be able to do by the end of the school year.



### Questions to Ask Your Child

Engage in conversations with your child using these suggested reading and math questions.



### Topics to Discuss with the Teacher

Find sample questions and topics you might want to talk about with the teacher related to reading and math skills.



### Learning Activities

Explore some easy ways you can support your child's learning important reading and math concepts and skills.



### Words to Know

Learn some important words and acronyms used at school to "speak the same language".



### Helpful Resources to Practice Skills at Home

Click the link to access a collection of reading and math resources aligned to your child's grade level.



# LITERACY

## New Expectations for Eighth Grade

- Read from a wide range of high-quality, increasingly challenging literary and informational texts.
- Comprehend texts of steadily increasing complexity as they progress through school.
- Acquire the habits of reading closely and independently for sustained periods of time.
- Connect prior knowledge and experiences to text.
- Show a steadily growing ability to discern more from and make fuller use of text.



## Key Skills

- Read and understand literature within the 6-8 text complexity\* band.
- Read independently for an extended time.
- Make connections to their background knowledge and relevant experiences to engage with text.

*\*A complex text is determined by word length and frequency, sentence length, text meaning or purpose, text structure (how the text is organized or put together), language conventions (spelling, punctuation, and grammar) and clarity.*

## Learning through Reading and Writing

- K-12 Standards for Reading define what students should understand and be able to do by the end of each grade. Students should demonstrate their proficiency of these standards both orally and through writing. For students to be college and career ready, they must read from a wide range of high-quality, increasingly challenging literary and informational texts. One of the key requirements of the Standards for Reading is that all students must be able to comprehend texts of steadily increasing complexity as they progress through school. Students should also acquire the habits of reading closely and independently for sustained periods of time. They need to connect prior knowledge and experiences to text. They must also show a steadily growing ability to discern more from and make fuller use of text.
- To be college and career ready, students should learn how to offer and support opinions/arguments, demonstrate understanding of a topic under study, and convey real and/or imagined experiences. Students learn that a key purpose of writing is to communicate clearly and coherently. The NC ELA Writing Standards emphasize the importance of writing routinely in order to build knowledge and demonstrate understanding. The complete writing process (from prewriting to editing) is clear in the first three writing standards. These standards define what students should understand and be able to do by the end of each grade.

## Key Skills continued

### Listening and Speaking

- The K-12 Speaking and Listening Standards define what students should understand and be able to do by the end of each grade. To become college and career ready, teachers must provide students with ample opportunities to communicate their thinking orally through a variety of rich, structured conversations either in whole group, or in small group settings, or with a partner. To be a productive part of these conversations, students need to contribute accurate information, respond and build on the ideas of others, use data and evidence effectively, and listen attentively to others.



### Questions to Ask Your Child

- The author's statement in lines xx most likely means...?
- What inference can be made about \_\_\_\_\_ as compared to \_\_\_\_\_?
- What inference can you make about...?
- According to lines (xx), what can you infer...?
- What can be inferred from the information in paragraph \_\_\_?
- Which quote from the text suggest \_\_\_\_\_?
- Which piece of evidence supports your analysis?
- What do the character's reaction in lines (xx) tell the reader...?
- What does the author's choice of words in paragraph \_\_ affect the meaning of the text?
- What is the effect of the figurative language in the sentences?
- How does the use of \_\_\_\_\_ in stanza \_\_\_\_\_ impact the tone of the text?
- How does the author's choice of words impact the meaning and tone of the text?
- How does the combination of the poem's title and the first stanza develop the poem?
- How does the information in paragraphs \_\_\_ & \_\_\_ develop the plot?
- How does the sentence contribute to the development of ideas about \_\_\_\_\_?
- How does the information in paragraphs \_\_\_-\_\_ develop the setting?
- What does the word \_\_\_\_\_ mean in paragraph \_\_\_\_\_?
- Select one underlined phrase from paragraph \_\_\_\_\_ that provides context for the meaning of the word crevice as it is used in the paragraph.
- Read the excerpt from "\_\_\_\_\_."
- Based on the context, what is the meaning of the word \_\_\_\_\_?



### Topics to Discuss with the Teacher

- Is my child reading on grade level?
- How can I support my child in increasing their reading comprehension?
- What additional resources do I need in order to support my child?



### Learning Activities

- Have student discuss what they are reading in class and conduct research together about that topic.
- Encourage your child to share the writing they are doing in class with you.
- Support your child in selecting books of interest to them and read the book alongside them; have book talks about the important ideas, any new vocabulary they experience, themes, etc.



## MATH

### Focus Areas for Eighth Grade

- Solving linear equations and inequalities
- Identifying, analyzing and comparing functions
- Developing understanding of similarity and congruency using transformations and coordinate geometry
- Pythagorean Theorem
- Volume of cylinders, cones and spheres
- Patterns in two-variable data



### Key Skills

- Numbers that never end and never repeat are irrational and students can estimate their value to one decimal place.
- Exponents tell how many times to multiply the base and students can rewrite numbers with exponents to numbers without exponents.
- Scientific notation is a way to write very large and very small numbers and students can convert between standard notation and scientific notation.
- Angles inside and outside of a triangle have a special relationship and are used to solve problems.
- The angles created by a line that cuts through parallel lines have special relationships and students can use the special relationships to solve problems.

## Key Skills continued

- Translations, rotations, and reflections are rigid transformations and that dilations are a non-rigid transformation and students can use multiple transformations to transform figures on a coordinate plane.
- Two figures are congruent if they are the same size and same shape and similar if the sides are proportional; students can determine if two figures are congruent or similar.
- How to use the Pythagorean Theorem to find lengths on the coordinate plane to solve real-world problems.
- How the volume formulas for cylinders, cones, and spheres are created and they can use the formulas to solve problems.
- How to write linear equations and inequalities with one variable and use them to solve problems.
- The solution to a pair of linear equations is where the two lines intersect; students will recognize when the pair of linear equations have no solution, one solution, or infinite solutions.
- Functions have one output for each input; students will create rules (or equations) to represent the relationship between the input and output for a linear function.
- The slope and initial value of a line can be determined from a graph, two points, or words; students will use the slope and initial value to write a linear equation and interpret what the slope and initial value mean in the context of the problem.
- Scatterplots display data points and can show a positive or negative linear association, nonlinear association, or no association; students will identify any outliers, gaps, or clusters.
- Two-way tables summarize data for two categories; students will use two-way tables to calculate the relative frequencies to describe any association between the two variables.



## Questions to Ask Your Child

- Two companies are competing for a contract to make the programs for the high school football games. Howie's Printing charges a \$19.99 fee for printing and \$0.25 for each program printed. Mint Print charges a \$29.99 fee for printing and \$0.10 for each program printed. For what number of printed programs will Howie's Printing cost more than Mint Print?
  - a. Write and solve an inequality to describe this situation.
  - b. Describe what your solution means.
  - c. If you anticipate needing 75 programs for a football game, which company is the cheaper choice?
- The company charges \$45 a day for the car as well as charging a one-time \$25 fee for the car's navigation system (GPS). Write a function for the cost in dollars,  $c$ , and the number of days,  $d$ , the car was rented.
- Approximately, how much air would be needed to fill a soccer ball with a radius of 14 cm?



### Topics to Discuss with the Teacher

- What math will my student be learning this year?
- What skills should they already have mastered?
- How will I know if they need more practice?
- What are some ways that I can help my student prepare at home?



### Learning Activities

- Following Recipes to Cook
- Shopping
- Managing Money and Budgeting
- Puzzles, Board Games, Card Games
- Planning a Trip



### Words to Know

- Complementary Angles** - Two angles whose sum is 90 degrees.
- Congruent Figures** - Two or more figures having the same shape and same size. The figures do not have to be in the same position or direction.
- Dilation** - A transformation that produces a figure that is the same shape but a different size.
- Function** - A rule applied to an input value and yields an output.
- Linear Equation** - An equation which produces a straight line.
- Reflection** - A figure is flipped over an imaginary line without changing the size or shape.
- Rigid Transformations** - A motion that does not affect the size or shape of the figure.
- Rotation** - A figure is moved around a fixed point without changing the size or shape.
- Scientific Notation** - A way of writing very large or very small numbers. A number is written in scientific notation when a number between 1 and 10 is multiplied by a power of 10.
- Similar Figures** - Figures that have congruent corresponding angles and corresponding sides are proportional. Same shape, different size.
- Slope** - The steepness of a line, expressed as a ratio or rate of change.
- Supplementary Angles** - Two angles whose sum is 180 degrees.
- Transformation** - Changing the position, size, or orientation of a shape. There are four transformations we can perform: translation, reflection, rotation, and dilation.
- Translation** - A translation moves a figure either horizontally or vertically without changing the size or shape.
- Transversal** - A line that cuts across 2 or more other lines.





## Helpful Resources to Practice Skills at Home for Eighth Grade

<http://bit.ly/CMSHomeSchoolConnect>