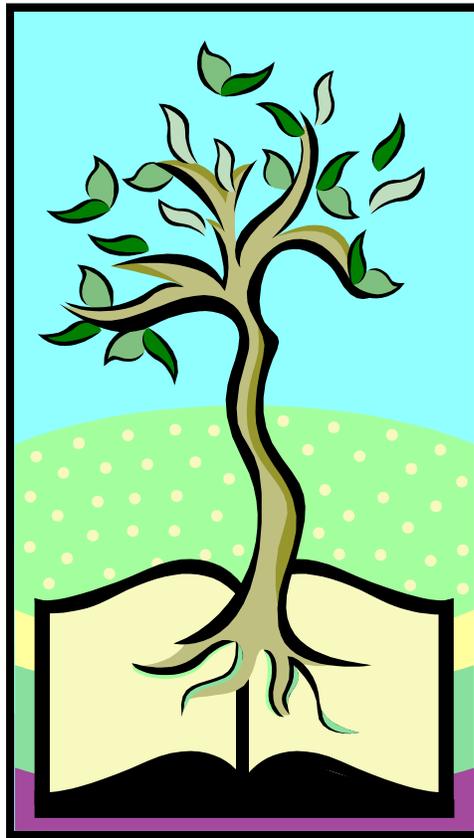


South Lyon Community Schools
Middle School
Parent Curriculum Guide
For
English Language Arts and Mathematics
2019-2020



Curriculum
Instruction

CITA

South Lyon Community Schools

Technology
Assessments

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English Language Arts

READING

Definition of Reading

Reading is the process of constructing meaning through the dynamic interaction among the reader, the text, and the context of the reading situation. (Michigan Reading Association)



From this perspective, strong readers are not defined as those who demonstrate mastery of a series of isolated skills, but rather as one who can apply these skills independently and flexibly in a variety of reading situations. This means that readers need to know how to employ certain skills, when and why to apply their skills, and that they must be willing and able to apply their skills spontaneously. Readers must be able to apply their knowledge and skills as they construct meaning for different texts under a variety of reading conditions.

Readers should be able to integrate information within a story to identify a central theme, or to use titles and subtitles within an informational passage (e.g. science, social studies, etc.) to identify the author's central purpose. Readers also must have knowledge about the purposes for reading, the skills and strategies they can use, and about how different reader, text, and context factors can influence their reading. For example, it is important for readers to understand how the structure of stories may differ from the structures of different content area materials. Finally, we want readers to develop positive attitudes about reading and positive self-perceptions about themselves as readers. It is also important for readers to develop an interest in reading a variety of materials for a variety of purposes.

WRITING



Pre-Writing

Pre-writing is the stage in which writers generate and discover ideas and consider the purpose and audience for their writing.

Virtually all experiences within the school setting and outside of school may serve as pre-writing activities. Some examples are using journals, reading, researching, discussing, brainstorming, free-writing, listening to music, and so on. These activities may stimulate thinking, generate ideas, extend vocabulary, and deepen concepts.

Drafting

Written composition is the development, organization and recording of the thoughts initiated in the pre-writing stage. Drafting is discovering thoughts, as well as communicating them. Students may write the first draft with little concern for form or mechanics, or they may dictate ideas to a scribe. This stage would include informal sharing with peers or adults.

Revising

Revision is the "re-seeing" of the content of a piece of writing. At its best, revision entails reorganization and development of subject matter, as well as stylistic changes made to suit a writer's purpose and intended audience. Only selected pieces of writing should be subjected to close analysis of content and form, depending upon the particular purpose or audience. Students will revise if they care about the piece they have written. Because of its substantive nature, revision should be seen as distinct from proofreading.

Proofreading/Editing

Proofreading/editing is the stage of the writing process in which the writer attends to correctness in punctuation, spelling, word choice, usage, and so on. Correctness is not only a courtesy the writer owes the reader, but also the lack of correctness may affect communication.

Publishing/Sharing Writing

Only selected pieces of writing will be taken to the final stage of publishing in the classroom. Some publishing is beneficial for young writers, although, only limited time, effort, and value should be given to it in contrast to time, effort, and value given to pre-writing, drafting, and sharing. Perfection should not be expected in published writing, particularly in the writing of beginning and developing writers.

Our Middle School English Language Arts units are aligned to the Michigan Standards for English Language Arts. A copy of the standards may be found at:

www.michigan.gov/documents/mde/MDE_ELA_Standards_599599_7.pdf or obtained through the office at your student's school.

The standards articulate rigorous grade-level expectations in the areas of speaking, listening, reading and writing to prepare all students to be college and career ready. The Reading Standards place emphasis on the sophistication of what students read and the skill with which they read. Whatever students are reading, students must also show a steadily growing ability to better comprehend and make fuller use of text including making an increasing number of connections among ideas and between texts.

The Writing Standards place emphasis on three text types: argument, informational or explanatory, and narrative writing. While all three types are important, the standards put particular emphasis on students' ability to write sound arguments on substantive topics and issues, as this ability is critical to college and career readiness. The standards stress the importance of the writing-reading connection by requiring students to draw upon and write about evidence from literary and informational texts.

The Language Standards include the essential "rules" of standard written and spoken English, but they also approach language as a matter of craft and informed choice among alternatives. The vocabulary standards focus on understanding words and phrases, their relationships, and their nuances, and on acquiring new vocabulary.

You will notice your child's English Language Arts instruction includes the following components:

Sixth Grade

- Close reading of both fiction and nonfiction text in order to identify and analyze theme
- Examining how the theme is developed over the course of fiction and non-fiction reading
- Evaluating a claim or argument made in writing and identifying when a claim is supported with reasons, and when it is not
- Using context to determine word meaning
- Developing a claim in writing and providing clear evidence and reasons in support of an argument
- Conducting research, gathering information from multiple sources

Seventh Grade

- Close reading of fiction to examine the influence of story elements on plot development
- Close reading of nonfiction to identify an author's purpose
- Citing specific evidence when analyzing text
- Using context to determine word meaning
- Conducting research, gathering information from multiple sources
- Introducing and developing a claim by using clear reasons and evidence; developing that claim through writing

Eighth Grade

- Closely reading fiction and nonfiction in order to analyze what is explicitly stated and what can be inferred based on the reading
- Identifying how authors support ideas
- Citing evidence that most strongly supports an idea or argument
- Using context to determine word meaning
- Writing an argument to support a claim using clear reasons and evidence
- Conducting research, gathering information from multiple sources



MATHEMATICS

All students will:

- ◆ learn to think and reason mathematically
- ◆ develop operational knowledge and conceptual understanding in mathematics
- ◆ construct new meaning in mathematics by actively building from prior knowledge

Communicate Mathematically

Students will read, write, and discuss mathematics using signs, symbols, and vocabulary. Students will demonstrate their mathematical literacy in three areas: computational (includes vocabulary), mathematical reasoning (conceptual understanding), and problem solving. There is a powerful connection between developing a strong mathematical vocabulary and developing meaningful mathematical knowledge. Students use math vocabulary to explain their mathematical reasoning, ask and understand questions, evaluate and verbalize conjectures, and communicate solutions.

Parents can assist students in learning their math vocabulary by asking them to verbally explain their mathematical thinking using their math vocabulary. Simple and complex vocabulary can become second nature to a student through frequent use. A functional knowledge and usage of mathematical vocabulary will empower your student to communicate and reason with more confidence. For many students, understanding and using math vocabulary is essential to their development of a deeper understanding of the math concepts.

“I am a word person. Numbers don’t mean anything to me unless there are words behind them - reasons I can verbalize.”

Anne, eighth grader

Mathematical Reasoning

Students learn to gather evidence, make conjectures, and come to logical conclusions using critical thinking skills. When students can connect mathematical ideas, their understanding is deeper and more lasting. Students learn to:

- ❖ recognize and use connections among mathematical ideas
- ❖ understand how mathematical ideas interconnect and build on one another
- ❖ explain their reasoning and look for evidence or proof to justify that their understandings will apply consistently over time

Students as Mathematical Problem Solvers

Students will have opportunities to solve a wide variety of problems in their mathematics class. Over their 6-8 math experience, students refine their ability to systematically and with confidence attack difficult mathematical problems. Students learn to apply Habits of Mind in the classroom. Persistence and Communicating with Accuracy and Precision are two Habits of Mind that students apply while using problem solving strategies to solve algorithmic problems and investigations.

Our mathematics curriculum involves content and the processes used to master the content at each grade level. In grades 6-8 students are immersed in mathematics in real-world scenarios as they journey through GoMath! and the Discovering Algebra programs. These challenge students in all three areas of math literacy: computation, math reasoning, and problem solving.

Our Middle School Mathematics units are aligned to the Michigan Standards for Mathematics. A copy of the standards may be found at www.michigan.gov/documents/mde/K-12_MI_Math_Standards_REV_470033_7_550413_7.pdf

The standards articulate rigorous grade-level expectations in the areas of reasoning, modeling and conceptual understanding as they relate to mathematics to prepare students to be college and career ready. As students progress through the curriculum, they will be demonstrating a deeper understanding of how to make sense of the math they are doing.

The Math Standards place an emphasis on Standards for Mathematical Practice, a collection of habits and skills that mathematicians use in the field to help solve problems and that all students should develop to be better mathematicians.

What is GO Math! ?

Students in 6th and 7th grades will be studying mathematics from GO Math! materials. The content is organized into units. Each unit consists of rigorous problems students solve in small groups or individually. Higher order thinking skills are required to solve GO Math! problems. This requires students to explain, justify and critique their peers' thinking as well as their own. The curriculum is structured to help students communicate their strategies and their reasoning so that their mathematical understandings are deepened. The digital components of GO Math! are designed to support students, parents and teachers. Some features include Math on the Spot, which provides video tutorials, and Personal Math Trainer, a personalized Learning system.

Sixth Grade Mathematics Units of Study:

- Numbers
- Number Operations
- Proportionality: Ratios & Rates
- Equivalent Expressions
- Equations and Inequalities
- Relationships in Geometry
- Measurement and Data

Seventh Grade Mathematics Units of Study:

- The Number System
- Ratios and Proportional Relationships
- Expressions, Equations, and Inequalities
- Geometry
- Statistics
- Probability

Eighth Grade Math

Students in this class will build a stronger foundation in their pre-algebraic thinking by investigating abstract concepts such as linear equations and integers, while applying and extending ideas such as algebraic expressions. Students' learning will be enhanced by technology that is engaging and promotes critical thinking as well as application of knowledge. After completing 8th Grade Math, students will enter high school more mathematically literate and well-prepared for 9th grade Algebra. The 8th Grade Math course is supported by the GO Math! Program, published by Houghton-Mifflin-Harcourt.

The 8th Grade Math Course, like our other math courses, is aligned to the Grade 8 Michigan Standards for Mathematics. The course is structured to encourage students to think deeply, articulate and justify their ideas and reason abstractly. This can occur in various ways such as: working in small groups, being asked to solve "real world" problems, or completing a thinking routine that allows their thinking to be visible.

Eighth Grade Mathematics Units of Study:

- Real Numbers, Exponents, Scientific Notation
- Proportional & Non Proportional Relationships, Functions
- Solving Equations and Systems
- Transformational Geometry
- Measurement Geometry
- Statistics

Algebra in 8th grade

Students develop mathematical literacy as they make connections between algebra and the world around them. Success in algebra is a gateway to many varied career opportunities. With the teacher as a guide, students will learn algebra by doing mathematics. Students make sense of important algebraic concepts (mathematical reasoning), learn essential algebraic skills (computation), and discover how to use algebra (problem solving). Instruction is supported with the use of Discovering Algebra: An Investigative Approach published by Key Curriculum Press; and the use of graphing calculator technology.

Students who take Algebra in 8th grade will be taught both 8th grade Math Standards & High School Algebra Standards. The course is structured to cover a year and a half of Math Curriculum in one school year. Students who enroll in Algebra have strong math skills and can work well in a fast paced classroom environment while keeping up with the workload.

During this journey, successful learning will come from students' personal involvement, often when they work with other in small groups. They will talk about algebra, share ideas, and learn from and with the members in their group. This work and communication with others strengthens their understanding of mathematical concepts.

A graphing calculator and data-collection devices are appropriately used in the classroom as tools that help students explore new ideas and investigate and answer questions. Learning to appropriately use technology and being able to interpret its output will prepare students to successfully use new technologies in the future. Parent and student access to *Calculator Notes* is available from www.keymath.com/DA or the classroom teacher.

Algebra Units of Study:

- Statistics
- Linear Equations and Systems of Equations
- Linear Inequalities and Systems
- Exponential Equations
- Quadratic Equations
- Functions
- Pythagorean Theorem
- Introduction to Geometry



What is Math Lab?

The State requirements for more rigor in mathematics at the high school level require that all students demonstrate competency in understanding Algebra II concepts, earn four high school math credits, and take math their senior year. We know that some students will need extra support in meeting these more rigorous requirements. Therefore, we have created a class called Math Lab.

Students who qualify for this support will receive assistance to accelerate their learning of mathematics in the regular curriculum. The emphasis is on the pre-teaching of concepts that will be introduced at a later time in the classroom. Pre-teaching provides students with prior knowledge and builds a foundation that increases the students' confidence and success relative to the new information. When these new concepts are introduced in the regular classroom, this prior knowledge and mathematical foundation will assist the student in meeting the expectations to demonstrate proficiency in understanding and applying mathematical skills and concepts. For more information about Math Lab, please contact your middle school counselor or building administrator.

Helping your Middle School student:

You can do a great deal to help your student succeed in mathematics. Here are some strategies that can be used through the year with many of the mathematics units.

- Encourage your child to do their homework on a regular basis. Provide a regular place and time to do homework.
- Have your child show you their mathematics notebook and explain to you what they have been doing in class. *It is very important that students take responsibility to safeguard this notebook; it is an important instructional tool used in their development of mathematical literacy.*
- Help them to be more organized. Look for sections in the notebook that contain class notes, vocabulary, homework, and assessment pieces.
- Have your child explain the words in the vocabulary list or the solution to a problem.
- Encourage your child by explaining that you believe that they can succeed through trying and working hard at the assignments.

"The first teachers are the parents, both by example and conversation."

Lamar Alexander



Questions and comments parents can use to support mathematics homework

- ✚ What is the problem you're working on?
- ✚ What do the directions say?
- ✚ What words (vocabulary) can you use to explain the problem or your thinking?
- ✚ Where do you think you should begin?
- ✚ Are there other possibilities?
- ✚ What would happen if.....?
- ✚ What do you already know that can help you work through the problem (schema)?
- ✚ What have you done so far?
- ✚ Have you solved similar problems that would help?
- ✚ Can you draw a diagram or picture of the problem?
- ✚ How can you organize the information? Table? Chart? Graph? Columns?
- ✚ Do you see any patterns or relationships that will help solve this?
- ✚ Can you explain what the teacher asked you to do?
- ✚ Can you tell me where you are stuck?
- ✚ How does this relate to.....?
- ✚ What assumptions are you making?
- ✚ Can you re-state the problem another way?
- ✚ What math strategies have you used in the past?
- ✚ Can you think of a math strategy that you can try here?
- ✚ Is there another possibility or strategy that would work?
- ✚ Could you use any materials e.g., buttons, navy beans, paper strips, spaghetti, blocks, etc to help you work the problem?
- ✚ Can this problem be "acted out"?
- ✚ Do you have any notes or papers in you notebook that can help you?
- ✚ What did you try that did not work?
- ✚ Can you go to another problem and come back to this one later?
- ✚ How do you know your solution is reasonable?
- ✚ Help me understand this part.....
- ✚ How can you convince me your answer makes sense?

Resource: A Family's Guide: Fostering your child's success in school mathematics. Pre-kindergarten to Grade 12, National Council of Teachers of Mathematics