Lake Shore Public Schools
28850 Harper
St. Clair Shores, MI 48081

A
PARENT'S GUIDE
TO
MATHEMATICS/ENGLISH LANGUAGE ARTS
GRADE LEVEL CONTENT EXPECTATIONS

WHAT YOUR CHILD NEEDS
TO KNOW BY THE END OF

THIRD GRADE

Welcome to Our School

This school year promises to be an exciting time for your child, filled with learning, discovery, and growth. It is also a time to share a new guide the Michigan Department of Education has developed for you, outlining the types of literacy and mathematics skills students should know and be able to do at the end of each grade.

Please feel free to share this guide with your family and friends. Use it when you talk with your child's teacher. Ask what *you* can do to support learning in the classroom and reinforce learning at home. You can find more ideas and tools to help you stay involved in your child's education at www.michigan.gov/mde.

We value and share your commitment to your child's education. We look forward to working together to help your child achieve and succeed.

Elementary Principals

George Lewis, Masonic Heights Elementary
Martha Kliebert, James Rodgers Elementary
Elizabeth Netschke, Violet Elementary

A Parent Guide to Grade Level Content Expectations

Michigan Sets High Academic Standards –for ALL

This booklet is a part of Michigan's Mathematics and English Language Arts Grade Level Content Expectations (GLCE). It is just one in a series of tools available for schools and families. The Michigan Department of Education (MDE) provides similar booklets for families of children in grades K-5.

Teacher versions of the Grade Level Content Expectations are finished for grades kindergarten through fifth. They state in clear and measurable terms what students in each grade are expected to know and be able to do. They also guide the design of the state's grade level MEAP tests required in the No Child Left Behind Act (NCLB) legislation.

Educators and classroom teachers from Michigan school districts have been involved in the development and/or review of Michigan's GLCE. The expectations were designed to ensure that students receive seamless instruction, from one grade to the next, leaving no gaps in any child's education. More importantly, they set high expectations in literacy and mathematics so we can better prepare all K-12 students for the challenges they will face in a global 21st century.

To learn more about the Michigan Curriculum Framework, visit www.michigan.gov/mde and click on **"K-12 Curriculum."**

***THIRD GRADE* MATHEMATICS** is the science of patterns and relationships. It is the language and logic of our technological world. Mathematical power is the ability to explore, to imagine, to reason logically and to use a variety of mathematical methods to solve problems - all important tools for children's futures. A mathematically powerful person should be able to:

- reason mathematically.
- communicate mathematically.
- solve problems using mathematics.
- make connections within mathematics and between mathematics and other fields.

Michigan's **Mathematics Grade Level Content Expectations** (GLCE) are organized into five strands:

- Number and Operations
- Algebra
- Geometry
- Measurement
- Data and Probability

In the third grade, students gain proficiency in addition and subtraction of whole numbers, and continue to develop meaning and computational skill in multiplication. This culminates in knowledge of the 10x10 multiplication table. Students are introduced to decimals through money. Work in measurement is closely related to increased emphasis on ideas from geometry, including developing meaning for area and perimeter.

Glossary Terms

Words that have asterisks (*) are defined in the Glossary located at the end of this section.

NUMBERS AND OPERATIONS

Understand and Use Number Notation and Place Value

❑ Read and write numbers to 10,000 in numerals and words and match them to quantities they stand for.

❒ Recognize and write numbers to 10,000 in expanded notation* using place value*.
Example: Expanded notation
2,517 is 2 thousands, 5 hundreds, 1 ten, and 7 ones
2,517 is 2000 + 500 + 10 + 7

❑ Compare and order numbers up to 10,000.

Count in Steps and Understand Even and Odd Numbers

- ❑ Count orally by 6's, 7's, 8's and 9's starting with 0, making the connection between multiplication and repeated addition.
  Example: 6x3 →6+6+6→0, 6, 12, 18; so 6x3=18.

- ❑ Know that even numbers end with 0, 2, 4, 6, or 8.
  -can be shared in two equal groups
  -can be grouped into pairs with no remainder
  -are multiples of 2 (can be evenly divided by 2)

- ❑ Know that odd numbers end with 1, 3, 5, 7, or 9
  -will have one left over when paired

  Complete patterns involving even and odd numbers
  Examples: 17, 19, 21, ___, ___, ___
  22, 24, 26, ___, ___, ___

Add and Subtract Whole Numbers

- ❑ Use mental strategies to fluently* add and subtract two-digit numbers.

  Examples:
  Use multiples of 10 and 100.
  12 – 5 = 7
  120 – 50 = 70
  1200 – 500 = 700
  Use fact extensions.
  13 – 7 = 6 15 + 8 = 23
  23 – 17 = 6 15 + 18 = 33
  Add tens, then ones. Put them together.
  53 + 25 = 78
  50 + 20 = 70
  3 + 5 = 8
  70 + 8= 78= 53 + 25

- ❑ Fluently add and subtract two numbers up to and including:

  a) two numbers through 999 with regrouping (use numbers that require regrouping of the tens and/or ones)
  b) two numbers through 9,999 without regrouping.

- ❑ Estimate* the sum and difference of two numbers with three digits (sums to 1,000).

Multiply and Divide Whole Numbers

- ❑ Use multiplication and division fact families to understand the relationship of the two operations.
  Example of fact family:
  Because 3 x 8 = 24, we know 24 ÷ 8 = 3 or 24÷3=8.

- ❑ Understand that multiplication and division problems can be solved by thinking of "How many groups?" and "How many in each group?" and write mathematical statements to represent those situations.

- ❑ Find products fluently* up to 10 x 10.

- ❑ Find answers to open sentences such as:
  7 x ___= 42
  "How many 7's are in 42?"
  12 ÷ ___= 4
  "How many 4's are in 12?"

- ❑ Use mental math to calculate simple multiplication and division problems involving multiples of ten.
  Example: 5x3 = 15, so 50x3=150, 5x30=150
  50x30=1500

Problem Solve with Whole Numbers

- ❑ Solve division problems involving remainders, viewing the remainder as the "number left over." e.g. when we have 25 children with 4 children per group, then there are six groups with 1 child left over.

- ❑ Solve and explain addition, subtraction, multiplication, or division problems using objects, pictures, words and/or numbers.

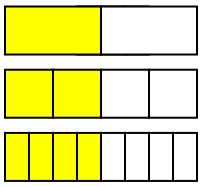
Understand Simple Fractions, Relation to the Whole, and Addition and Subtraction of Fractions

- ❑ Understand fractions are parts of a whole unit.

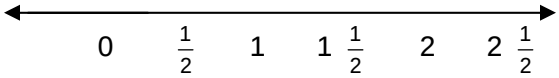
- ❑ Recognize the numerator as the number above the line in a fraction and the denominator as the number below the line.
  Example: In 3/5, (3 is the numerator*)
  (5 is the denominator*)

❑ Recognize, name and show equivalent fractions * by folding paper.

Example: Use denominators with 2, 4, or 8



• Use the number line (fraction strips) to develop understanding of fractions;



❑ Use the number line to add and subtract fractions.

Understand Simple Decimal Fractions in Relation to Money

❑ Understand and relate decimal fractions to fractional parts of each dollar

Example: 1/2 dollar = $0.50
1/4 dollar = $0.25

MEASUREMENT

Measure and Use Units for Length, Weight, Temperature and Time

❑ Know common units of measurement for length, weight and time and be able to measure in mixed units.

- o length ~ inches and feet, meters and centimeters
- o weight ~ grams and kilograms, pounds and ounces
- o time ~ hours and minutes, minutes and seconds, years and months

❑ Understand temperature is measured by degrees in Fahrenheit (F) and degrees in Celsius (C).

❑ Know temperatures indicating (32 degrees F) and (0 degrees C) is freezing; (212 degrees F) and (100 degrees C) is boiling.

Understand the Meaning of Area and Perimeter and Apply in Problems

❑ Know the difference between perimeter* and area*.

❑ Find/estimate the perimeter of a square or rectangle given the lengths of the sides.

❑ Use square units in calculating area by covering the area and counting the number of square units.

❑ Distinguish between units of length and area and choose a unit appropriate in the context.

- ❑ Be able to visualize one square inch and one square centimeter.

- ❑ Estimate the perimeter of a square in inches and centimeters: estimate the area of a square and rectangle in square inches and square centimeters.

Solve Measurement Problems

- ❑ Add and subtract money in dollars and cents.

$4.25	$10.75
+$2.50	-$5.45

- ❑ Add and subtract length, weight and times using mixed units within the same measurement system.

- ❑ Solve problems involving money, length and time.

- ❑ Solve contextual problems about perimeters of rectangles, and areas of rectangular regions.

GEOMETRY*

Recognize the Basic Elements of Geometric Shapes and Objects and Their Properties

- ❑ Identify points, line segments, lines and distance.
  Example:

  ● point*

  _____ line segment*

  ⟷ line*

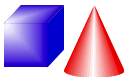
- ❑ Recognize perpendicular (⊥)and parallel (∥) lines in familiar figures and places; recognize parallel faces in box-shaped items.

- ❑ Name, describe and compare two-dimensional shapes such as parallelogram*, trapezoid*, circle, rectangle, square, and rhombus* using terms such as angles, sides, vertices* and line segments.

- ❑ Predict the results of putting together and taking apart two-dimensional and three-dimensional shapes.

  Example:

- ❑ Name, describe and build three-dimensional solids such as cube*, rectangular prism, sphere, pyramid* and cone*.



- ❑ Name parts of three-dimensional shapes such as faces*, surfaces, bases, edges, and vertices*.

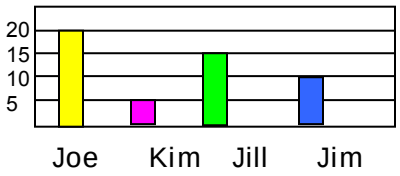
DATA AND PROBABLITY

Use Bar Graphs

- ❑ Read and interpret bar graphs* in both forms (vertical and horizontal); identify the maximum, minimum and range of values.

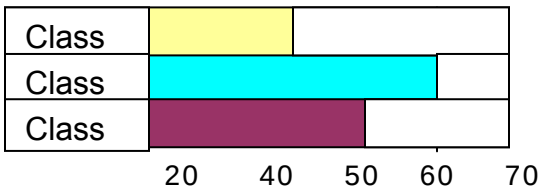
  Example 1: Vertical bar graph

  Number of books read by third grade students



  Example 2: Horizontal bar graph

  Number of books read by third grade classes



- ❑ Solve problems using information in bar graphs and compare bar graphs.

  Examples:

  - Using the first bar graph, which child read the least number of books?
  - Using the second bar graph above, which class read the most books?
  - Using the first bar graph above, which child do you think is probably a member of Class B in the second bar graph?

- ❑ Identify the maximum*, minimum*, and range* of values on a bar graph.

* Glossary Terms

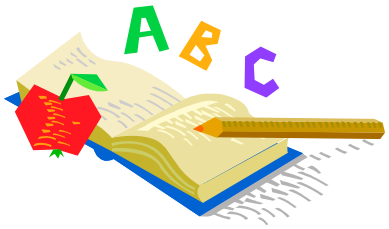
- **area –** the amount of surface inside shape found by covering with a squares
- **bar graph –** a graph that uses bars to represent numbers in the data
- **base –** a name used for the side of a polygon and a face of a three-dimensional figure
- **capacity –** the amount a container can hold
- **cone –** a pyramid that has a circular base
- **cube –** a three-dimensional six-sided figure (six faces) in the shape of squares (e.g., blocks, dice)
- **edge –** a line or segment where the surfaces of a solid meet
- **equivalent fractions –** different fractions that represent the same amount (e.g., 1/2=2/4)
- **estimate –** a reasonable guess using number or spatial sense
- **fluently –** the ability to calculate numbers with efficiency and accuracy
- **line –** a straight path that goes on forever in both directions
- **line segment –** a straight path between two endpoints
- **maximum –** the largest number in a set of data
- **minimum –** the smallest number in a set of data
- **parallelogram –** a four sided polygon that has 2 pairs of parallel sides (sides are always the same length)
- **perimeter –** the distance around a two-dimensional shape found by adding together the measured length of all the sides of the shape
- **polygon –** a closed shape with three or more sides such as a triangle or square
- **product –** the answer when you multiply two numbers
- **pyramid –** a three-dimensional solid with one base that is a polygon (other sides are all triangles that come together at a point)
- **quotient –** the answer when you divide two numbers
- **range –** the difference between the biggest (maximum) and the smallest (minimum) numbers in a set of data
- **rhombus –** a four sided polygon that has parallel sides of the same length
- **trapezoid –** a closed shape in which two of its
- sides are parallel
- **vertex (*plural,* vertices) –** the point where 2 lines, 2 sides of a polygon come together

Ways to encourage your child…
You are a fast learner!
Wonderful job!
This is correct!

***Third Grade* English Language Arts** (ELA) is more than just reading and writing. It includes skills like speaking, listening, and viewing as well. ELA offers us a way to communicate. Through ELA, your child can apply what s/he learns to solve real problems at home, at school and in the community.

Glossary Terms
Words that have asterisks (*) are defined in the Glossary located at the end of this section.

By the end of third grade, your child should know and be able to do the following:

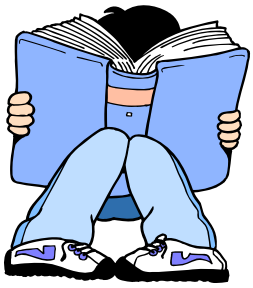


READING

Word Recognition & Word Study

- ❑ Use letter and word clues to recognize words.
- ❑ Easily recognize frequently encountered words.
- ❑ Use the sentences and words surrounding an unknown word to understand its meaning.
- ❑ Know the meaning of words third graders often see.
- ❑ Use strategies to construct meaning.
- ❑ Self correct and use fix-up strategies if a word doesn't sound right or make sense while reading.
- ❑ Automatically read words third graders often see.
- ❑ Read aloud using expression, punctuation cues and tone of voice.

Narrative Text (Fiction)



- ❑ Describe how characters in literature express feelings about one another.
- ❑ Identify and describe a variety of narrative genre, like folktales, fables, and realistic fiction.
- ❑ Identify and describe:
  - characters' thoughts
  - story theme*
  - main idea
  - lesson/moral
- ❑ Explain how authors use literary devices to:
  - develop a story theme
  - describe a setting

Informational Text (Non-fiction)

- ❑ Identify and describe a variety of informational genre, such as textbooks, encyclopedias, and magazines.
- ❑ Discuss informational text patterns:
  - problem/solution
  - sequence
  - compare/contrast
  - description

- ❑ Explain how authors and illustrators use text features to help readers understand ideas:
  - title
  - heading and subheading
  - time lines
  - preface
  - index
  - table of contents

Comprehension

- ❑ Connect personal knowledge and experience to themes* and ideas in texts.
- ❑ Retell story elements* with details.
- ❑ Compare and contrast relationships among characters, events, and key ideas.
- ❑ Use and apply what has been read in Science and Social Studies texts when reading.

Metacognition*

- ❑ Know when he/she does or does not understand what he/she is reading.
- ❑ Know when to use strategies to increase their understanding of texts:
  - predicting
  - making mental pictures
  - questioning
  - rereading
  - inferring*
  - summarizing*
  - graphic organizers*

Ways to encourage your child…

You are quick learner!
You have a great imagination!
This is wonderful work!
You are really catching on!

Critical Standards*

- ❑ Decide and discuss what qualities make a good story.
- ❑ With help from the teacher, begin to know how to measure the quality of their own work and the work of others.
- ❑ Use student and class created rubrics*.

Reading Attitude

- ❑ Be enthusiastic about reading and learning how to read.
- ❑ Choose to read and write on his/her own.

WRITING

Writing Genre

- ❑ Write a narrative piece that includes personification*, setting, and develops the character.
- ❑ Write poetry based on reading a variety of grade-level poetry.
- ❑ Write a report with a title, heading, subheading, and a table of contents.
- ❑ Use the steps in the writing process to produce and present a research project.

Writing Process

- ❑ Think about the purpose, audience, and author's styles when writing narrative and informational text.
- ❑ Before writing, use strategies such as story maps*, webs*, and Venn Diagrams* to plan the piece.
- ❑ Write sentences of varying lengths and patterns.
- ❑ Create a mood when drafting a story.
- ❑ Use organizational patterns in informational writing.
- ❑ Revise, edit, and proofread their writing using resources such as dictionary, spell check, and writing reference books.

Personal Style

- ❑ Express own personal style or individuality when writing.

Grammar and Usage

- ❑ Write with complete sentences using:
  - subject and verb agreement
  - past tense
  - nouns as possessive nouns*
  - commas in a series
  - quotation marks and capitalization in dialogue

Spelling

- ❑ Spell frequently used words correctly.
- ❑ Use the following word cues and resources found in the classroom to spell words:
  - letter/sound
  - word families
  - word walls
  - word lists
  - dictionaries
  - spell checkers

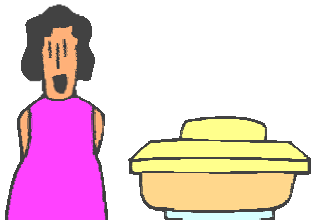
Handwriting

- ❑ Write the cursive* alphabet.

Writing Attitude

- ❑ Be enthusiastic to learn and practice writing.

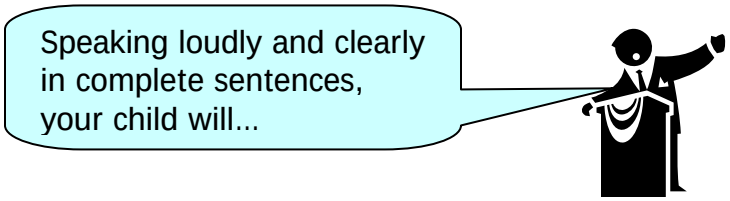
SPEAKING



Conventions *

- ❑ Use correct verb tenses to express the past, present and future.
- ❑ Change language to fit the audience and purpose.
- ❑ Emphasize key words.
- ❑ Vary the speed of speaking and tone of voice for effect.
- ❑ Make presentations using Standard English*.
- ❑ Provide examples of language differences from neighborhood to neighborhood and among different cultures.

Spoken Discourse*



- ❑ Participate in meaningful conversations with their peers such as book clubs or literature circles.
- ❑ Be able to discuss books and articles to explain why they are worthwhile and relevant.
- ❑ Be able to respond to multiple texts by reflecting, making connections, taking a position, and sharing understandings.
- ❑ Plan and deliver presentations that are organized and include facts, details, and a change in the pace for effect.

LISTENING AND VIEWING

Conventions*

- ❑ Listen carefully and answer questions with appropriate detail.
- ❑ Tell the difference between verbal and non-verbal strategies and how they improve understanding of the spoken message.
- ❑ Be aware of the role the media plays in focusing our attention on events and opinions.

Response

- ❑ Listen to, or view and discuss a variety of genre and compare their responses.
- ❑ Select, listen to, view and discuss classic and contemporary texts.
- ❑ Make connections, take a position, and share understandings between multiple texts.
- ❑ Retell, explain, and relate a speaker's message to personal experience.

Study Tip…

Find a quiet place, away from distractions, with ample room to work. Once you've found it, study at the same place every time. It could be a desk in your bedroom or the kitchen

* Glossary Terms

- **context clues** - hints from the surrounding words, phrases or sentences about the unknown word
- **conventions** - the rules about how words and language work when speaking or writing
- **critical standard** - the high level of quality students must be able to recognize, to determine if their work will meet expectations
- **cursive** - a style of handwriting in which the letters in a word are connected
- **genre** - a category used to describe different kinds of texts, such as folktales, fables, and realistic fiction
- **graphic organizer -** a form or pattern that is used to organize information
- **inference -** a logical guess based on clues in the text and on the reader's own knowledge and common sense
- **metacognition** - the process of thinking about one's own thinking. Example: Being able to know when they do or do not understand what they are reading.
- **metaphor / simile** - figures of speech in which two things or ideas are compared. Metaphors compare two things in such a way as to imply that one is another. *The fog **is** a wet blanket.* Similes use words such as "like" or "as" to compare. *The fog is **like** a blanket.*
- **personification** - a type of figurative language in which human qualities are given to animals, nonliving things, or ideas. Example: The toys in the baby's room begged us to play with them.
- **possessive noun** - a word that shows ownership. *The dog's collar is too tight*. Dog's is the possessive noun. It tells you the collar belongs to the dog.
- **rubric** - a scoring guide to assess student performance
- **Standard English -** the form of English widely accepted as being clear and understood
- **story elements -** include main characters, setting, problem, major events, resolution, and theme
- **story map -** chart used to outline details describing story elements
- **summarize -** to tell the important information in a selection and include the important details that support the main idea
- **theme -** the central idea or message in a piece of writing
- **Venn Diagram -** a chart with overlapping circles, used to compare and contrast
- **web -** a form or pattern resembling a web that is used to organize information
- **writing genre -** a category used to describe different kinds of writing, such as poetry, fiction, magazine article, etc.