

Livonia Public Schools

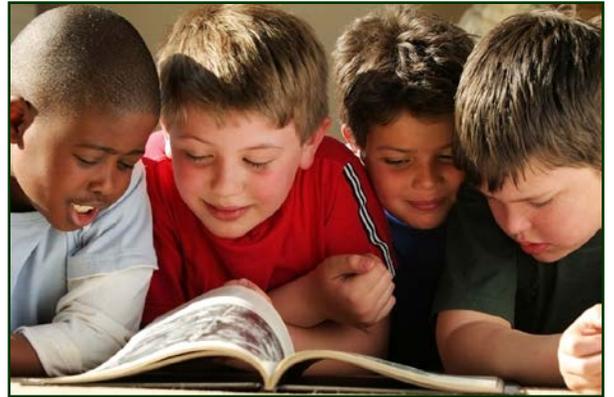
FOURTH GRADE ESSENTIAL CONTENT

Parent Guide

September 2016

Our curriculum is designed to provide on-going learning experiences which enable students to achieve these outcomes upon graduation:

- Acquire a core of understandings and competencies within the content areas
- Respect self, others, and the environment
- Use critical and creative thinking to make decisions and solve problems
- Know how to learn and work productively
- Work and participate independently and cooperatively
- Acquire and process information
- Communicate effectively



K-6 LIVING AND LEARNING

Acquiring and Using Information

Acquire information from a variety of sources.
Develop and use basic thinking skills.
Use critical and creative thinking to make decisions and solve problems.
Apply metacognitive skills to all thinking processes.

Personal Management/Ethics

Work productively to achieve learning.
Develop a positive attitude toward learning and work.
Demonstrate a commitment to personal and societal ethics.

Social Interaction

Communicate effectively to assist in group tasks.
Identify with the group.

ART

Apply skills and knowledge to perform in the arts.
Apply skills and knowledge to create in the arts.
Describe, analyze, interpret, and evaluate works of art.
Understand, analyze, and describe works of art in their historical, social and cultural contexts.
Recognize, analyze, and describe connections among the arts; between visual art and classroom curriculum; between visual art and everyday life.
Reflect upon and assess the characteristics of student's own processes and the merit of their art work and art work of others.
Experiment with technology as a tool to create art.

GENERAL MUSIC

Develop good singing posture.
Sing Core Repertoire with increasing accuracy in beat, rhythm and pitch.
Play recorder songs on G-A-B.
Sing using Solfege with emphasis on scale.
Improvise Solfege melodies.
Sing expressively (ex: loud, soft, fast, slow, phrasing, crescendo and diminuendo.)
Demonstrate sense of steady beat while singing or playing recorder.
Demonstrate reading and performance of whole note, whole rest, dotted-half note, half note, half rest, quarter note, quarter rest and paired eighth notes.
Identify line and space notes on treble staff.
Compose a short musical piece.
Participate in group musical activities.
Move to music appropriately.
Aurally recognize loud/soft, fast/slow, short/long and high/low.
Aurally identify musical instruments.
Aurally identify style of various musical compositions.
Opinion based critique of musical compositions.
Identify orchestral instruments.
Develop music vocabulary.
Explore music of famous composers.

HEALTH

Demonstrate knowledge of nutrition: importance of nutrients, healthful dietary guidelines, consumer food decisions.

Demonstrate understanding of exercise and fitness: understand physical fitness and its benefits, exercise and sport skills, develop fitness.

Develop an awareness of drugs: difference between misuse and abuse, ways to say NO, harmful effects of alcohol and tobacco.

Describe the effect of teasing and bullying on others.

LITERACY

Refer to details in text when explaining and drawing inferences.

Determine a theme or central idea and summarize text.

Identify main idea and explain how it is supported by key details.

Describe a character, setting or event drawing on specific details.

Explain the structure of an informational text.

Integrate information gained from more than one text.

Read grade level appropriate texts with purpose and understanding.

Know and apply grade-level phonics to decode words.

Read with sufficient accuracy and fluency to support comprehension.

Produce opinion, informational, and narrative writing pieces.

Conduct short research and writing projects.

Come to discussions prepared, following agreed upon rules for discussion and building on others' talk.

Report on a topic orally in an organized manner.

Use formal English when appropriate to task.

Use grade-appropriate spelling and conventions in writing.

Determine the meaning of unknown words.

Read and write routinely across the curriculum.

Type a minimum of 1 page in a single sitting.

LMC SKILLS

Standard 1: Access information efficiently and effectively to inquire, think critically, and gain knowledge

- Recognize the need for information
- Formulate questions based on information needs
- Identify various potential sources of information
- Develop and use successful strategies for locating information
- Seek information from diverse sources

Standard 2: Evaluate information critically and competently

- Determine accuracy, relevance, and comprehensiveness of information
- Distinguish among fact, point of view, and opinion
- Identify inaccurate and misleading information

- Select information appropriate to the problem or question

Standard 3: Use information accurately, creatively, and ethically to share knowledge and to participate collaboratively and productively as a member of a democratic society

- Organize information for practical application
- Integrate new information into own schema
- Produce and communicate information and ideas in appropriate formats
- Uses problem-solving techniques to devise strategies for improving process or product
- Practice ethical behavior when using print and digital resources (including freedom of speech, intellectual freedom, copyright, and plagiarism)

Standard 4: Appreciate literature and other creative expressions of thoughts and ideas and pursue knowledge related to personal interests and aesthetic growth

- Cultivate a love of reading and become a self-motivated reader
- Develop a knowledge of genres and literary elements
- Derive meaning from informational texts in various formats

Standard 5: Understand and practice Internet safety when using any electronic media for educational, social, or recreational purposes

- Practice strategies that promote personal safety and protect online and offline reputation
- Recognize that networked environments are public places governed by codes of ethical behavior
- Practice positive digital citizenship
- Distinguish website authority, validity, and purpose
- Understand the need for protecting personal privacy when using public access to digital sources
- Protect personal information and electronic devices in an online environment

MATHEMATICS

Understand that multiplication fact problems can be seen as comparisons of groups (e.g., $24 = 4 \times 6$ can be thought of as 4 groups of 6 or 6 groups of 4).

Multiply or divide to solve word problems by using drawings or writing equations and solving for a missing number.

Use what I know about addition, subtraction, multiplication and division to solve multi-step word problems involving whole numbers.

Represent word problems by using equations with a letter standing for the unknown number.

Determine how reasonable my answers to word problems are by using estimation, mental math and rounding.

Find all factor pairs for a number from 1 to 100.

Determine whether a given whole number up to 100 is a prime or composite number.

Create a number or shape pattern that follows a given rule.
 Notice different features of a pattern once it is created by a rule.
 Recognize that in multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
 Read and write larger whole numbers using numerals, words and in expanded form.
 Compare two large numbers using symbols to show the comparison.
 Round large whole numbers to any place.
 Add and subtract large numbers.
 Multiply a whole number up to four digits by a one-digit whole number.
 Multiply two two-digit numbers.
 Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors.
 Explain (and show models for) why multiplying a numerator and a denominator by the same number does not change the value of a fraction.
 Compare two fractions with different numerators and different denominators by creating common denominators or numerators or by comparing them to a benchmark fraction like one-half.
 Recognize that comparisons of fractions are valid only when the two fractions refer to the same whole.
 Compare fractions using symbols and justify the comparison by using models.
 Understand that improper fractions have a greater numerator than denominator.
 Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.
 Decompose a fraction into a sum of fractions with the same denominator.
 Add and subtract mixed numbers with like denominators.
 Solve word problems involving addition and subtraction of fractions with like denominators.
 Multiply a fraction by a whole number.
 Solve word problems involving multiplication of a fraction by a whole number.
 Show a fraction with a denominator of 10 as an equivalent fraction with a denominator of 100 in order to add the two fractions.
 Use decimals to show fractions with denominators of 10 and 100.
 Compare two decimals to hundredths by reasoning about their size.
 Show that I know the relative size of measurement units within a single system.
 Show the measurements of a larger unit in terms of smaller units and record these in a table.
 Use the four operations (+, -, \times , \div) solve word problems involving measurement; including simple fractions and decimals.

Use what I know about area and perimeter to solve real world problems involving rectangles.
 Make a line plot to show measurements involving fractions.
 Solve problems involving addition and subtraction of fractions by using information presented in line plots.
 Recognize angles as geometric shapes where two rays share a common endpoint.
 Understand that angles are measured with reference to a circle, with its center at the common endpoint of the rays.
 Use a protractor to measure angles in whole-number degrees.
 Solve addition and subtraction problems involving angles.
 Identify and draw points, lines, line segments, rays, angles and perpendicular & parallel lines.
 Classify two-dimensional shapes based on what I know about their geometrical attributes.
 Recognize and identify right triangles.
 Recognize and draw lines of symmetry.

Standards for Mathematical Practice

1. *Make sense of problems and persevere in solving them.*
 - When presented with a problem, I can make a plan, carry out my plan, and check its success.
2. *Reason abstractly and quantitatively.*
 - I can use numbers, words, and reasoning habits to help me make sense of problems.
3. *Construct viable arguments and critique the reason of others.*
 - I can make logical arguments and respond to the mathematical thinking of others.
4. *Model with Mathematics.*
 - I can recognize math in everyday life and use math I know to solve problems.
5. *Use appropriate tools strategically.*
 - I can use certain tools to help me explore and deepen my math understanding.
6. *Attend to precision.*
 - I can be precise when solving problems and clear when communicating my ideas.
7. *Look for and make use of structure.*
 - I can see and understand how numbers and shapes are organized and put together as parts and wholes.
8. *Look for and express regularity in repeated reasoning.*
 - I can notice when calculations are repeated. Then I can find more general methods and short cuts.

PHYSICAL EDUCATION

Demonstrate competence in selected locomotor skills.

Demonstrate competence in selected object control skills:
forehand strike, backhand strike, batting, catching, hand
dribble, foot dribble, two-hand pass, overhead throw,
overhead pass, punting, rope jumping, underhand throw,
underhand strike.

Demonstrate competence in selected body management skills:
lifting and lowering, standing posture.

Demonstrate growth and development in selected indicators of
physical fitness.

Demonstrate knowledge of proper safety procedures.

Develop personal-social skills appropriate for sports-related
activities and games: positive self-concept, self-discipline,
fair play, respect for property and individuals, leadership,
attentiveness, cooperation.

Demonstrate competence in selected sports and games for
life-long physical activities: soccer, racquet sports,
basketball, softball, football.

SCIENCE

Apply understanding of science through reading, writing and
technology.

Understand the requirements and relationships of living things.

Understand the characteristics of the sun, moon and earth.

Understand forms of energy (heat and electricity).

Understand matter.

Science and Engineering Practices

- Asking Questions and Defining Problems*
 - I can wonder about the world and write it as a question.
- Developing and Using Models*
 - I can create ways to model real world situations.
- Planning and Carrying Out Investigations*
 - I can plan and carry out investigations.
- Analyzing and Interpreting Data*
 - I can understand and explain what data means.
- Use Mathematics and Computational Thinking*
 - I can use math strategies to explain my thinking.
- Constructing Explanations and Designing Solutions*
 - I can come up with solutions and explain why.
- Engaging in Argument from Evidence*
 - I can use proof to support my findings.
- Obtaining, Evaluating and Communicating Information*
 - I can collect, understand, and show my information.

SOCIAL STUDIES

We are in the process of realigning the grade 3 and 4 social studies curriculum. As a result, the essential content may shift between these two grade levels. For example, your child's school may teach Michigan studies in grade 3 and U.S. regions in grade 4 or vice versa.

Michigan Studies

Understand the sequence and cause and effect relationships of the major events, people and developments of Michigan History.

Analyze, interpret and evaluate key decisions, events and developments in the history of Michigan.

Understand relationships, patterns and issues in the geography and development of Michigan.

Apply understanding of civic principles and values to their own lives, Michigan historical examples and contemporary issues.

Understand the basic purpose, structure, organization and role of local, state and national government.

Apply understanding of basic economic principles, concepts and systems to their own lives and Michigan developments.

Locate, use and organize information from a variety of sources to address topics and questions regarding Michigan history, questions and issues.

Analyze and respond to questions and issues in Michigan history and developments.

Participate and act constructively and ethically in the classroom, school and community.

U.S. Regions

Understand examples of people and events in U.S. regions that contributed to the U.S.

Understand ideas and values important in our history and lives.

Understand, locate and analyze the characteristics of places and cultures of the U.S.

Apply understanding of civic principles and values to their own lives and issues and problems at the local, state or national level.

Understand basic economic principles at work in their own lives and in U.S. regions.

Locate, use and organize information from a variety of sources to address topics and questions regarding U.S. regions.

Analyze and respond to questions and issues in their own community and in U.S. regional studies.

Participate and act constructively and ethically in the classroom, school and community.

TECHNOLOGY

Creativity and Innovation: Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.

Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.

Research and Information Fluency: Students apply digital tools to gather, evaluate, and use information.

Critical Thinking, Problem Solving, and Decision Making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.

Digital Citizenship: Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.

Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems, and operations.

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