

Lake Shore Central Schools

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Lake Shore Central Schools

CURRICULUM GUIDE FOR GRADES K—5



Grade 4

A MESSAGE FROM THE SUPERINTENDENT

Dear Parent/Guardian,

As you are aware, New York State has adopted a series of initiatives which have established Common Core State Standards for grades K-5. Within a series of booklets, Lake Shore Central Schools will provide an overview of the Common Core State Standards, district initiatives in achieving those standards, and core curriculums in English Language Arts, Mathematics, Science and Social Studies. In addition, these booklets provide the goals and objectives for each grade level in the various subjects. It is our hope this information will provide an opportunity for each of you to assist in the learning process of our children.

The education of our children is the responsibility of everyone—the district, parents and the students themselves. In order to achieve success, everyone must work together in this important process. I encourage each of you to take an active role in the education of our children to ensure they achieve their full potential.

I look forward to working with you as we embark upon new and exciting times in the education of our children at Lake Shore Central Schools.

Sincerely,

James Przepasniak
Superintendent of Schools

NOTES

K-5 WEBSITES

For additional information about our curriculum, see the Website for the Lake Shore Central School District. Curriculum information will be found under the heading of Instructional Programs.

Lake Shore Central School
<http://www.lakeshorecsd.org>

For additional information about specific topics, please visit the following web sites:

New York State Education Department Parent Resources
<http://usny.nysed.gov/parents/>

Office of State Assessment
<http://www.p12.nysed.gov/apda/>

Office of Curriculum and Instructional Support
<http://www.p12.nysed.gov/ciai/>

Common Core State Standards Initiative
<http://www.corestandards.org/>

*Education is a social process...
Education is growth...
Education is not a preparation for life;
Education is life itself.
—John Dewey*

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HOMWORK POLICY

Philosophy:

Homework is a valuable aid in helping students maximize their school experience. It reinforces classroom learning, builds responsibility, and develops essential study habits. Homework is one vehicle for home-school communication. Parents are encouraged to make it a positive experience for children. Parents must plan a homework time in order to strike a balance between academics, family life and the child's needs.

General Types of Homework:

- ◆ *Practice assignments* reinforce skills and concepts taught in class.
- ◆ *Preparation assignments* provide background information before topics appear in class.
- ◆ *Extension assignments* emphasize individual needs and interests, creativity and application of knowledge gained in class.
- ◆ *Study assignments* prepare students for tests and provide the completion of independent reading.

Student Responsibilities:

1. Listen to class directions for assignments and include due date if necessary.
2. Ask questions if you do not understand the assignment.
3. Take home the instructions and materials needed to complete the assignment.
4. Work with your parents to set a regular time and place to do your homework.
5. Do your own work, but ask your parents for assistance if needed.
6. Work should be complete, legible and done to the best of your ability.
7. Show your parents the completed work to ensure quality.
8. Ask your teacher for help the next day if you did not understand the assignment.
9. Return assignments on the date due.

N.Y.S. TESTING

English Language Arts (ELA)
3rd, 4th, 5th, 6th, 7th & 8th Grade

Mathematics
3rd, 4th, 5th, 6th, 7th & 8th Grade

Science
4th & 8th Grade

Social Studies
5th & 8th Grade



FOURTH GRADE DEVELOPMENTAL DESCRIPTORS

In fourth grade, the students grow academically and socially. More is expected of the child in school. Listed below are brief descriptors of the developments of fourth graders. Every child is different and may not fit perfectly into this framework.

The Fourth Grader may:

- ◆ Want to put some distance between themselves and adults, and may rebel against authority.
- ◆ Need to be part of a group.
- ◆ Seek independence.
- ◆ Possess a high activity level.
- ◆ Express a wide range of emotions and verbalize easily.
- ◆ Empathize.
- ◆ Think independently and critically, but are tied to peer standards.
- ◆ Begin to increase their sense of truthfulness.
- ◆ Typically not be self-confident.

School isn't just academics. Your child's teachers are helping him/her grow socially. At nine-years old, your child is learning how to make decisions and set standards.

The Fourth Grader may:

- ◆ Begin making decisions.
- ◆ Gain a greater sense of responsibility.
- ◆ Set personal standards.
- ◆ Develop personal interests and abilities.
- ◆ Develop social skills.
- ◆ Learn to engage in group decision-making.

Signs of Trouble

At this level, students can encounter great difficulty if they have weak study skills. Also, deficiencies in basic skills will hamper progress. Poor readers will find it extremely difficult to handle materials. Students who haven't mastered basic math facts will face more difficulty in their mathematics classes.

Students will have trouble if they are not able to:

- ◆ Organize their time efficiently.
- ◆ Behave appropriately in the classroom.
- ◆ Master a solid reading vocabulary.
- ◆ Handle basic addition, subtraction, multiplication, and division facts automatically.
- ◆ Study for tests.

HOMWORK POLICY

The following are guidelines for parents to help monitor the duration of homework assignments. The frequency and/or the nature of assignments may differ among teachers.

Grade	Approximate Time
K	15 minutes (assisted)
Grade 1	15 minutes
Grade 2	15-20 minutes
Grade 3	20-30 minutes
Grade 4	30-45 minutes
Grade 5	45-60 minutes

Parent Responsibilities:

1. Provide a quiet and well-lit work area with needed homework materials.
2. Schedule a regular time for completion of homework.
3. Insist that homework be completed and returned to school on its due date.
4. Praise your child for his/her efforts. Display his/her papers and artwork at home. Communicate a positive school attitude.
5. Assist your child with assignments only if necessary. Do not over-supervise.
6. Consult your child's teacher when necessary.
7. Enhance your child's learning through enriching and related experiences such as trips to the library and family field trips.
8. Read for pleasure with your child.

ENGLISH LANGUAGE ARTS (ELA)

New York State English Language Arts Standards

- Standard 1: Language for Information and Understanding**
Students will listen, speak, read, and write for information and understanding. As listeners and readers, students will collect data, facts, and ideas; discover relationships, concepts, and generalizations; and use knowledge generated from oral, written, and electronically produced texts. As speakers and writers, they will use oral and written language that follows the accepted conventions of the English language to acquire, interpret, apply and transmit information.
- Standard 2: Language for Literacy Response and Expression**
Students will read and listen to oral, written and electronically produced texts and performances from American and World literature; relate text and performances to their own lives; and develop an understanding of the diverse social, historical, and cultural dimensions the texts and performances represent. As speakers and writers, students will use oral and written language that follows the accepted conventions of the English language for self-expression and artistic creation.
- Standard 3: Language for Critical Analysis and Evaluation**
Students will listen, speak, read and write for critical analysis and evaluation. As listeners and readers, students will analyze experiences, ideas, information and issues presented by others, using a variety of established criteria. As speakers and writers they will use oral and written language that follows the accepted conventions of the English language to present, from a variety of perspectives, their opinions and judgments on experiences, ideas, information and issues.
- Standard 4: Language for Social Interaction**
Students will listen, speak, read and write for social interaction. Students will use oral and written language that follows the accepted conventions of the English language for effective social communication with a wide variety of people. As readers and listeners, they will use the social communication of others to enrich their understanding of people and their views.

FOURTH GRADE SOCIAL STUDIES

Content Understanding

- ◆ Native American Indians of New York State.
- ◆ European encounter: Three worlds (Europe, Africa, and the Americas) meet in the Americas.
- ◆ Colonial and Revolutionary periods.
- ◆ The new nation.
- ◆ Industrial growth and expansion.
- ◆ Urbanization, economic, political and social impacts.
- ◆ Government.
- ◆ Purposes of government.
- ◆ Local and State Government.
- ◆ New York State Geography.



FOURTH GRADE SOCIAL STUDIES

Grade 4: Local History and Local Government

The grade 4 social studies program builds on the students' understanding of families, schools, and communities and highlights the political institutions and historic development of their local communities with connections to New York State and the United States. The in-depth study of local government will emphasize the structure and function of the different branches and the roles of civic leaders. Students continue to learn about the rights, responsibilities, and duties of citizenship. By participating in school activities that teach democratic values, students develop a sense of political efficacy and a better understanding of the roles of supporters and leaders. Students expand their civic concepts of power, equality, justice, and citizenship as they learn about local government.

The historic study of local communities focuses on the social/cultural, political, and economic factors that helped to shape these communities. Students study significant people, places, events, and issues that influenced life in their local communities. Students can investigate local events and issues and connect them to national events and issues. The grade 4 program should consider the following themes and events at the local level: Native American Indians of New York State, the European encounter, the colonies and Revolutionary War period, the new nation, and the period of industrial growth and development in New York State. This chronological framework will help students to organize information about local history and connect it to United States history.

FOURTH GRADE ELA DESCRIPTORS READING

THE STUDENT:

Students in the fourth grade level are confident, independent, and enthusiastic readers. Background knowledge and higher-level thinking skills allow them to appreciate a variety of literature including, but not limited to, novels, poetry, and reference materials. They have internalized reading strategies and demonstrate fluent oral expression. The ability to analyze and interpret text is developing. They successfully connect ideas in text to other ideas, experiences, and literature.

Fourth grade readers use cueing systems and word-strategies to correctly read texts of increasing difficulty. They demonstrate confidence and independence as readers.

THE PROGRAM:

Through the implementation of the literature-based reading program, Orton-Gillingham direct instruction, and the process approach to the teaching of writing, Lake Shore students will become competent readers, writers, listeners and speakers.

A balanced literacy approach builds a connection between reading and writing. Reading includes: phonemic awareness, phonics, fluency, vocabulary, and comprehension. Writing is taught using a process approach which emphasizes content, as well as mechanics and spelling. Experiences in the ELA program will help students to listen for and retain information, as well as to speak clearly and confidently in large and small group setting.

ORTON-GILLINGHAM

Students receive multi-sensory reading and spelling instruction in large groups. Focus begins with decoding/encoding skills and continues to vocabulary and comprehension skills. All students are given benchmark assessments three times per year to determine which students are at risk and in need of Academic Intervention Services (AIS).

FOURTH GRADE ELA-READING OBJECTIVES

The Fourth Grader will be able to....

- ◆ Distinguish between fact and opinion in a non-fiction selection.
- ◆ Make generalizations from a given set of data.
- ◆ Assemble data to solve problems.
- ◆ Follow multi-step directions.
- ◆ Recognize topic and main ideas in a non-fiction selection.
- ◆ Note relevant details in a non-fiction selection.
- ◆ Relate cause and effect from a given set of data.
- ◆ Draw a logical conclusion from expressed information.
- ◆ Use the glossary to acquire the meaning of vocabulary words.
- ◆ Use index to locate information.
- ◆ Use table of contents to locate information.
- ◆ Use graphic organizers to categorize data.
- ◆ Use dictionaries, encyclopedias, electronic resources to acquire information.
- ◆ Categorize and classify information from 2 non-fiction selections.
- ◆ Acquire information on one topic from more than one source.
- ◆ Predict outcomes of story from stated information.
- ◆ Draw logical conclusions about story events in a fiction piece.
- ◆ Make inferences about character traits from actions and dialogue
- ◆ Summarize story using setting, character, and plot.
- ◆ Sequence important events in a fiction piece.
- ◆ Acquire necessary vocabulary to understand fiction.
- ◆ Use story maps, sets, and charts to understand setting, characters, problems, events, and conclusions in a fiction piece.
- ◆ Understand fantasy and realism in stories.
- ◆ Decide which story element makes the story fantastic.
- ◆ Identify author's purpose.
- ◆ Evaluate data in order to solve problems.
- ◆ Recognize the same theme across different texts.
- ◆ Differentiate between fiction and non-fiction writing.
- ◆ Use Venn diagram to compare/contrast stories in Theme 4
- ◆ Make value judgments based on given data.
- ◆ Read in pairs to discuss character.
- ◆ Read in small groups to identify theme.

SOCIAL STUDIES K-5

SKILLS K-5

- ◆ Acquiring Information
- ◆ Using information
- ◆ Presenting information
- ◆ Participating in Interpersonal and Group Relations

PROBLEM SOLVING SKILLS K-5

- ◆ The student will be able to define or identify a problem.
- ◆ The student will be able to hypothesize, investigate data and solve problems which are either presented by the teacher or which are identified by the student.
- ◆ The student will be able to work with others engaged in problem-finding/solving skills and recognize and accommodate value conflicts in the decision making process.
- ◆ The student will be able to communicate orally, visually, and/or in writing the results of the problem-finding/solving effort.

CONCEPTS K-5

Change	Civic Values
Citizenship	Culture
Empathy	Environment
Identity	Interdependence
Nation-State	Needs and Wants
Places and Region	Technology

SUGGESTIONS FOR PARENTS

- ◆ Make a family tree and talk about family history.
- ◆ Field trips in your local community.
- ◆ Talk to your child at his/her level of understanding about world events.
- ◆ Read stories together about famous people.
- ◆ Talk about the history of the holidays: Fourth of July, Veterans Day, Patriots Day etc.

SOCIAL STUDIES

K-5

In Social Studies, students confront questions about the wonder and excitement of human kind in the world. Social Studies help students understand their roots, see their connections to the past, comprehend their context, recognize the commonality of people across time, appreciate the delicate balance of rights and responsibilities in an open society, and develop the habits of thoughtful analysis and reflective thinking. In helping students answer these questions, social studies engage students in the study of history, geography, economics, government and civics. Instruction draws on other disciplines such as anthropology, sociology, political science, psychology, religion, law, archaeology, philosophy, art, literature, other humanities subjects and the sciences.

Social Studies gives students the knowledge, intellectual skills, civic understanding, and dispositions towards democratic values that are necessary to function effectively in American society. Ultimately, Social Studies instruction helps students assume their role as responsible citizens in America's constitutional democracy and as active contributors to a society that is increasingly diverse and interdependent with other nations of the world. Social Studies instruction provides students with the background to conduct research in order to cast informed votes, with the skills to place conflicting ideas in context, and with the wisdom to make good judgments in dealing with the tensions inherent in society such as the enduring struggle to find the balance between protecting the rights of the individual and promoting the common ground.



New York State recommends that students read a minimum of 25 books per year across all content areas and standards.

The students read for:

- ◆ Information and understanding
- ◆ Literary response and expression
- ◆ Critical analysis and evaluation
- ◆ Social interaction

The following recommended reading list is a sampling of the typical books that may be selected for this grade level.

Children, with support from teachers and parents, are expected to read 25 age-appropriate books. The selections address many interests and maturity levels. When selecting a book, attention should be given to personal preference and needs.

Students should use many strategies while reading. They should systematically monitor their personal reading by asking themselves questions such as “Does it sound right?”, “Does it make sense?” and “Does it look right?” The primary goal should always be to read for understanding and enjoyment.

The single most important activity for building the knowledge required for success in reading is reading...Jim Trelease

FOURTH GRADE
RECOMMENDED READING LIST
(WITH AUTHOR'S LAST NAME)

Blume, Judy—**ALL TITLES**
VanAllsburg, Chris—**ALL TITLES**
Giff, Patricia Reilly—**ALL TITLES**
Say, Allen—**ALL TITLES**
Ingalls Wilder, Laura—**ALL TITLES**
Cleary, Beverly—**ALL TITLES**
Polacco, Patricia—**ALL TITLES**
Hurwitz, Joanna—**ALL TITLES**
Sobal, Donald—**ENCYCLOPEDIA BROWN, BOY DETECTIVE**
Osborne, Mary Pope—**MAGIC TREE HOUSE BOOKS**
Dadey, Debbie—**THE BAILEY SCHOOL KID SERIES**
Black, Holly—**THE SPIDERWICK CHRONICLES SERIES**
Trip, Valerie—**AMERICAN GIRLS COLLECTION**
Kline, Suzy—**HORRIBLE HARRY SERIES**
MacLachlan, Patricia—**SARA PLAIN AND TALL**
Cherry, Lynne—**GREAT KAPOK TREE**
Evans, Richard Paul—**THE TOWER**
Atwall, Nancy—**THE THANKSGIVING DOOR**
Rossiter, Dan Parson—**RUGBY AND ROSIE**
Seldon, George—**A CRICKET IN TIMES SQUARE**
Levine, Ellen—**THE IROQUOIS**

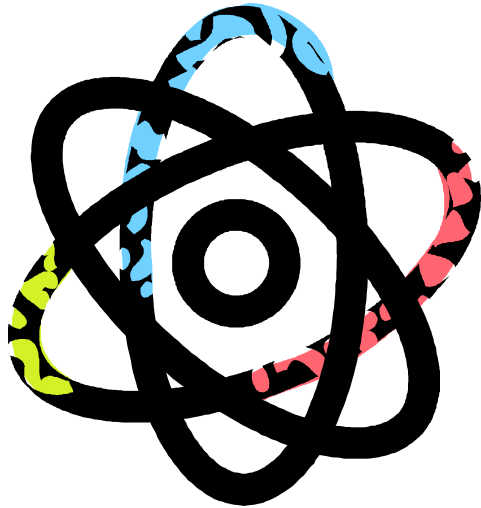
SOCIAL STUDIES
K-5

-
- Standard 1: **History of the United States and New York**
Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in the history of the United States and New York.
- Standard 2: **World History**
Students will use a variety of intellectual skills to demonstrate their understanding of major ideas, eras, themes, developments, and turning points in world history and examine the broad sweep of history from a variety of perspectives.
- Standard 3: **Geography**
Students will use a variety of intellectual skills to demonstrate their understanding of the geography of the interdependent world in which we live—local, national, and global— including the distribution of people, places, and environments over the Earth's surface.
- Standard 4: **Economics**
Students will use a variety of intellectual skills to demonstrate their understanding of how the United States and other societies develop economic systems and associated institutions to allocate scarce resources, how major decision-making units function in the United States and other national economies, and how an economy solves the scarcity problem through market and non-market mechanisms.
- Standard 5: **Civics, Citizenship, and Government**
Students will use a variety of intellectual skills to demonstrate their understanding of the necessity for established governments; the governmental system of the United States and other nations; the United States Constitution; the basic civil values of American constitutional democracy; and the roles, rights, and responsibilities of citizenship, includes avenues of participation.

FOURTH GRADE SCIENCE

The Fourth Grader will be able to....

- ◆ Recognize the need for good nutrition.
- ◆ Understand growth and development.
- ◆ Observe and describe properties of materials, using appropriate tools.
- ◆ Describe chemical and physical changes, including changes in states of matter.
- ◆ Describe types of energy and how objects change when they interact with energy.
- ◆ Observe how energy changes form.
- ◆ Describe the effects of electrical plants, gravity, magnetism and mechanical forces and how forces operate across distances.



FOURTH GRADE RECOMMENDED READING LIST (WITH AUTHOR'S LAST NAME)

- Winthrop, E.—**CASTLE IN THE ATTIC**
- Lensky, Lois—**INDIAN CAPTIVE: STORY OF MARY JEMISON**
- White, E.B.—**CHARLOTTE'S WEB**
- Wallace, Bill—**NO DOGS ALLOWED**
- Hesse, Karen—**LETTERS FROM RIFKA**
- Coerr, Eleanor—**SANAKO AND THE THOUSAND PAPER CRANES**
- George, Jean Craighead—**MY SIDE OF THE MOUNTAIN**
- Avi—**POPPY**
- Robinson, Barbara—**THE BEST CHRISTMAS PAGEANT EVER**
- Rockwell, Thomas—**HOW TO EAT FRIED WORMS**
- Woodruff, Elvira—**THE ORPHAN OF ELLIS ISLAND**
- Rozakis, Laurie—**MATTHEW HENSON AND ROBERT PEARY: THE RACE FOR THE NORTH POLE**



ELA—READING

SUGGESTIONS FOR PARENTS

Making Reading a Family Affair

Hints For Parents

In addition to daily homework assignments, be sure to set aside some time each night for reading. A book may be read in one evening or over a period of several weeks.

Ask your children to read aloud a portion of the book that they like best. Praise them for trying and doing a good job. This will help with their self confidence in order to build comprehension and personalize their understanding by asking them what they enjoyed about what they read. Encourage them to describe the best part of the story.

Give children an opportunity to make use of the local library. Help them find the appropriate section for their reading level. Teach older children to use the card catalog (or computer) to locate books. Check out library books on a regular basis.

Remember to set an example for your children. Take time to read every day. When children see their parents reading for pleasure, they are motivated to do the same. Share what you have read with your children.

Reading can open doors to knowledge. It leads to a world of information, adventure, mystery, laughter and love. Children will seek to enter this world with encouragement from home and school.

Happy Reading!

FOURTH GRADE

SCIENCE

The Fourth Grader will be able to....

- ◆ Use scientific inquiry to develop explanations of natural phenomena in a continuing, creative process.
- ◆ Use scientific method and procedures to conduct an experiment.
- ◆ Compare and contrast living and non-living things.
- ◆ Describe how organisms and species change over time.
- ◆ Describe the major stages in the life cycles of selected plants and animals.
- ◆ Describe basic life functions of common living specimens.
- ◆ Describe some survival behaviors of plants and animals.
- ◆ Describe the factors that help promote good health and growth in humans.
- ◆ Describe how plants and animals, including humans, depend upon each other and the non-living environment.
- ◆ Describe the relationship of the sun as an energy source for living and non-living cycles.
- ◆ Identify ways in which humans have changed their environment and the effects of those changes.
- ◆ Explore and investigate science through the use of 4 kits. They include Crayfish, Plant Growth, Magnets and Electrical Circuits. This gives students a hands-on approach to Science in which they enjoy and learn.



K-5 SCIENCE AND HEALTH

PHYSICAL SETTING

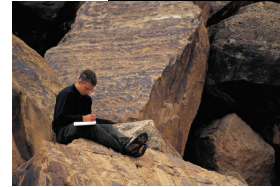
- ◆ Understanding seasonal changes.
- ◆ Understanding the water cycle, weather, erosion, and extreme natural events.
- ◆ Describe, compare, and observe the properties of matter (color, hardness, odor, sound, taste, length, width, volume, size, shape, mass, temperature, texture and reflectiveness).
- ◆ Understand that energy (heat, chemical, light) exists in many forms.
- ◆ Describe chemical and physical changes in the states of matter (solid, liquid, gas).
- ◆ Describe the effects of common forces, (push & pull) of objects such as magnetism, gravity and mechanical forces.

HEALTH

- ◆ Identify how the body systems work and interrelate in pattern of growth and development.
- ◆ Explain how and why we should eat nutritionally balanced meals.
- ◆ Identify the harmful effects of alcohol, tobacco and other drugs.
- ◆ Identify common diseases and disorders and how they may be prevented and treated.

Grade K: Overview of the five senses, the function and development of teeth and oral hygiene
Grade 1: Senses—taste, touch and smell
Grade 2: Senses—sight and sound
Grade 3: Muscular and skeletal system
Grade 4: Digestion and nutrition
Grade 5: Respiratory system

FOURTH GRADE ELA-WRITING DESCRIPTORS



New York State suggests that students write 1000 words per month.

Students at the fourth grade level present ideas and information in clear order and logical sequence, making use of introductions, transitions, paragraphs, and conclusions. They develop ideas with supporting details, varied language/sentence patterns, and descriptive vocabulary. Ideas connect to give a sense of character, context and point of view. Students demonstrate control of the conventions of standard written English, such as spelling, punctuation and grammar.

Students at the fourth grade writing level present ideas fully and clearly. They build an engaging plot around a situation, conflict or problem. They effectively present point of view, sense of context, and/or characters. Their ideas are presented in clear order and logical sequence with transitions made through the use of paragraphing, introductions, and/or conclusions. They demonstrate control of simple language conventions. Complex language conventions are increasingly evident. They effectively use strategies in their writing, such as dialogue, description or suspense to sustain the reader's interest. The very experienced writer engages the reader with lively, descriptive language, a sense of audience, and an expressive individual sense of voice.

The Fourth Grader will be able to....

- ◆ Write a short report of several paragraphs recounting an actual experience.
- ◆ Write a brief summary.
- ◆ Construct concept maps and semantic webs.
- ◆ Produce a simple outline.
- ◆ Write sequential directions.
- ◆ Record data, facts, and ideas, both by following teacher direction and independently.
- ◆ Write a report using notes from at least two sources.
- ◆ Write a main idea and support it with facts and details.
- ◆ Produce a clear well-organized report of at least one page.
- ◆ Use organizational patterns for writing, such as compare/contrast and cause/effect.

FOURTH GRADE ELA-LISTENING/SPEAKING DESCRIPTORS

The Fourth Grader will be able to....

- ◆ Draw logical conclusions from expressed information.
- ◆ Explain theme with details from story.
- ◆ Write sentences in a logical order to tell a story.
- ◆ Write a personal narrative with a focus throughout.
- ◆ Write an original play with a focus to maintain theme.
- ◆ Write simile, poems, cinquains, with language that clarifies the subject.
- ◆ Compare/contrast settings of two stories in one theme.
- ◆ Successfully complete personal response task in theme tests.
- ◆ Write a paragraph on meeting a challenge.
- ◆ Use semantic webs, Venn diagrams, etc. to compare and contrast information.
- ◆ Organize a planning page with the 5Ws to respond to a story.
- ◆ Organize a planning page with story elements to respond to questions.
- ◆ Write a persuasive essay to parents to change a home situation.
- ◆ Write a personal essay to express viewpoint.
- ◆ Write a conversation or interview with a partner.
- ◆ Write a persuasive essay to teacher or principal concerning a classroom or school problem.
- ◆ Write notes and letters to classmates, teachers, and parents.

Listening

Students at the fourth grade listening level focus their attention for an extended period of time. They demonstrate awareness and understand by reacting to what is said in ways that enhance the situation. They discriminate sharply between what is and is not relevant.

The Fourth Grader will be able to....

- ◆ Acquire information and/or understand procedures.
- ◆ Identify elements of character, plot and setting to understand author's message or intent.
- ◆ Identify author's use of rhythm, repetition, and rhyme.
- ◆ Form an opinion about the message of advertisements, based on the language.
- ◆ Evaluate the speaker's style of delivery by using criteria such as volume and tone of voice.
- ◆ Listen for the tone of voice and content that signals friendly communication.

K-5 SCIENCE AND HEALTH

To meet Common Core State Standards in Science, the Elementary Science Program at Lake Shore stresses learning that is hands-on, process-oriented and inquiry-based. It encourages students to think rather than just memorize. Four hands-on kits are used: crayfish, plants, circuits and magnets.

PROCESS SKILLS

- ◆ Explain verbally, graphically or in writing the relationship observed in the physical and living environments.
- ◆ Use appropriate scientific tools for measuring, observing, describing, classifying and sequencing to solve problems about the natural world.
- ◆ Ask "why" questions to seek a greater understanding of objects and events.
- ◆ Develop ideas for proposed solutions.
- ◆ Suggest ways objects can be improved.
- ◆ Generate possible solutions by applying age-appropriate math and science skills.
- ◆ Recognize and analyze trends.

LIVING ENVIRONMENT

- ◆ Describe the characteristics of living and non-living things.
- ◆ Describe the life process common to all living things.
- ◆ Recognize that there is a genetic continuity between all living things.
- ◆ Describe the structure of plants and animals.
- ◆ Understand the life cycle of plants and animals.
- ◆ Describe the life functions of common living things.
- ◆ Understand the interdependence of plants and animals.
- ◆ Recognize that human decisions have an impact on plants and animals.

FOURTH GRADE MATHEMATICS

The Fourth Grader will be able to....

- ◆ Compare and order decimals through hundredths.
- ◆ Estimate decimal sums and differences.
- ◆ Add and subtract decimals through hundredths.
- ◆ Identify two– and three-dimensional figures.
- ◆ Identify lines, line segments, rays, angles, and parts of a circle.
- ◆ Identify congruent, similar, and symmetrical figures, slides, flips, and turns.
- ◆ Find perimeter, area and volume.
- ◆ Divide with tens and hundreds.
- ◆ Use compatible numbers to estimate quotients.
- ◆ Divide by two-digit numbers.
- ◆ Analyze and solve problems using skills and strategies.

Suggestions for Parents

- ◆ Students are still expected to master the basic skills and facts. Help your child memorize the basic facts (addition, subtraction, multiplication and division).
- ◆ Review your child's homework daily.
- ◆ The grocery shopping experience provides many opportunities for learning such as:
 - weighing produce
 - using money—up to one dollar
- ◆ Cooking can be a learning experience that involves measurements, fractions, time and temperature.
- ◆ Younger children should be encouraged to solve picture puzzles to develop spatial relationship and problem solving skills.
- ◆ Encourage problem solving

FOURTH GRADE ELA–LISTENING/SPEAKING DESCRIPTORS

Speaking

Students at the fourth grade level communicate ideas effectively in an organized and cohesive manner. They contribute ideas actively with relevant information and may extend responses beyond what is being discussed. Ideas are complete and well-developed with detailed elaboration. Students make insightful comments, ask thoughtful questions, and use descriptive vocabulary. They hold the attention of others when speaking.

The Fourth Grader will be able to....

- ◆ Use complete sentences and age-appropriate vocabulary to convey factual information..
- ◆ Present a three-minute oral report on a given subject.
- ◆ Use logical order in presentations to classmates.
- ◆ Express an opinion about the environment and support it with two or more facts.
- ◆ Draw conclusions from stated facts.
- ◆ Participate in class discussions.
- ◆ Discuss the themes of imaginative texts using complete sentences, age-appropriate vocabulary, and logical order.
- ◆ Present a book review in which are described characters, setting, and plot.
- ◆ Perform a radio play.
- ◆ Make judgments based on data with a personal point of view.
- ◆ Use personal experiences and knowledge to analyze and evaluate new ideas.
- ◆ Express an opinion or judgment about school or community issues.
- ◆ Ask and respond to questions.
- ◆ Read an article and a story about the same topic to generalize about cause/effect and other relationships.
- ◆ Respond appropriately in class discussion about a trip.
- ◆ Respond appropriately in teacher conference to explain reasoning of persuasive essay.
- ◆ Take a telephone message and relay important information.
- ◆ Discuss the content of friendly letters to get to know the writer.
- ◆ Avoid interrupting in social conversations.

Suggestions for Parents

- ◆ Parents should model proper listening skills.
- ◆ Parents should model correct grammar and pronunciation

MATHEMATICS, SCIENCE & TECHNOLOGY (MST)

Common Core State Standards for Mathematics, Science and Technology

Standard 1: **Analysis, Inquiry and Design**

Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

Standard 2: **Information Systems**

Students will access, generate, process, and transfer information using appropriate technologies.

Standard 3: **Mathematics**

Students will understand the concepts of and become proficient with the skills of mathematics; communicate and reason mathematically; become problem solvers by using appropriate tools and strategies. Through the integrated study of number sense and operations, algebra, geometry, measurement, statistics and probability.

Standard 4: **Science**

Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Standard 5: **Technology**

Students will apply technological knowledge and skills to design, construct, use and evaluate, products and systems to satisfy human environmental needs.

Standard 6: **Interconnectedness Common Themes**

Students will understand the relationship and common themes that connect mathematics, science, and technology and apply the themes to these other areas of learning.

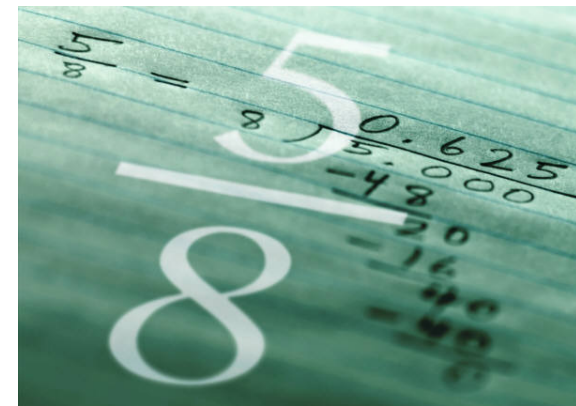
Standard 7: **Interdisciplinary Problem Solving**

Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.

FOURTH GRADE MATHEMATICS

The Fourth Grader will be able to....

- ◆ Estimate time; use time; determine elapsed time, including the calendar.
- ◆ Estimate, measure, and convert customary units of length, capacity, mass and temperature.
- ◆ Estimate, measure, and convert metric units of length, capacity, mass, and temperature.
- ◆ Divide multiples of 10, 100, and 1,000 by one-digit numbers.
- ◆ Use compatible numbers to estimate quotients.
- ◆ Divide two and three-digit numbers by one-digit numbers, including money.
- ◆ Find averages.
- ◆ Identify and write fractions and mixed numbers.
- ◆ Find equivalent fractions; find fractional parts of a set.
- ◆ Add and subtract fractions and mixed numbers with like denominators.
- ◆ Relate fractions and mixed numbers to decimals.



FOURTH GRADE MATHEMATICS

The following learning objectives are covered at the Fourth Grade level at Lake Shore Central Schools.

The Fourth Grader will be able to...

- ◆ Read and write whole numbers through millions.
- ◆ Identify the place value of a digit in whole numbers through 999,999.
- ◆ Compare and order whole numbers through hundred thousands.
- ◆ Round numbers through thousands.
- ◆ Estimate whole-numbers sums and differences.
- ◆ Add up to five-digit whole numbers, including money.
- ◆ Subtract up to five-digit whole numbers, including money.
- ◆ Make change using amounts up to \$100.
- ◆ Use 2 through 10 as factors.
- ◆ Use 2 through 10 as divisors.
- ◆ Use multiplication properties and rules of division.
- ◆ Relate multiplication and division using fact families.
- ◆ Collect, organize, and describe data using median and mode.
- ◆ Read, make, and interpret bar graphs, pictographs and line graphs.
- ◆ Graph ordered pairs on a coordinating grid.
- ◆ Determine the probability of an event.
- ◆ Multiply multiples of 10, 100 and 1,000 by one-digit numbers.
- ◆ Estimate products.
- ◆ Multiply two, three and four-digit numbers by one-digit numbers, including money.
- ◆ Multiply multiples of 10, 100, and 1,000 by two-digit numbers.
- ◆ Multiply two-, three-digit numbers by two-digit numbers, including money.

FOURTH GRADE MST #3

All mathematics education within the Lake Shore Central Schools is based on Standard 3 from the New York State Education Department's Common Core State Standards for Mathematics, Science and Technology.

Mathematics learning and testing are dependent upon three components of function in our world today. The Components include the ability to understand and become proficient with math skills, to be able to communicate mathematically, and to problem solve using appropriate tools and strategies. The goals of these components are broken down into two strands: Process Strands and Content Strands.

Process Strands:

- ◆ Problem Solving
- ◆ Reasoning and Proof
- ◆ Communication
- ◆ Connections
- ◆ Representation

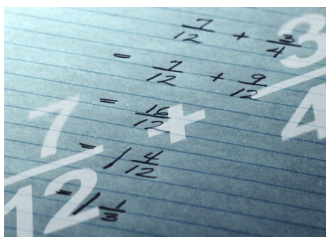
Content Strands

- ◆ Number Sense and Operations
 - Skip count by 1,000's.
 - Read, write and compare whole numbers to 10,000.
 - Understand place value up to 10 thousands
 - Recognize equivalent representations for numbers up to four digits.
 - Understand the associative property of multiplication.
 - Understand fractions as locations on number lines and as divisions of whole numbers.
 - Recognize and generate equivalent fractions.
 - Compare and order unit fractions or fractions with the same denominator.
 - Understand decimals as part of a whole.
 - Read and write decimals to hundredths, using money as a context.
 - Compare and order decimals (less than 1) to the hundredth place in the context of money.
 - Understand the properties of odd/even numbers as a result of multiplication.
 - Add and subtract numbers up to 10,000.

FOURTH GRADE

MST #3

- Select appropriate computational and operational methods to solve problems.
 - Understand various meanings of multiplication and division.
 - Use multiplication and division as inverse operations to solve problems.
 - Multiply two-digit numbers by one-digit numbers and two-digit numbers by two-digit numbers.
 - Multiply and divide multiples of 10 and 100 up to 1,000.
 - Divide two-digit dividends by one-digit divisors.
 - Interpret the meaning of remainders.
 - Add and subtract proper fractions with common denominators.
 - Express decimals as an equivalent form of fractions to tenths and hundredths.
 - Add and subtract decimals to tenths and hundredths using a hundreds chart.
 - Round numbers less than 1,000 to the nearest tens and hundreds.
 - Check reasonableness by using estimation.
- ◆ Algebra Strand
- Evaluate and express relationships using open sentences with one operation.
 - Use the symbols $<$, $>$, $=$ to compare whole numbers and unit fractions and decimals.
 - Find the value or values that will make an open sentence true.
 - Understand numeric and geometric patterns.
 - Analyze a pattern or a whole-number function and state the rule, given a table or an input/output box.



FOURTH GRADE

MST #3

- ◆ Geometry Strand
- Identify and name polygons..
 - Identify points and line segments when drawing a plane figure.
 - Find perimeter of polygons.
 - Find the area of a rectangle.
 - Define and identify vertices, faces, and edges.
 - Draw and identify intersecting, perpendicular, and parallel lines.
 - Identify points and rays when drawing angles.
 - Classify angles as acute, obtuse, right and straight.
- ◆ Measurement Strand
- Select tools and units (customary and metric) appropriate for the length being measured.
 - Use a ruler to measure to the nearest standard unit.
 - Know and understand 12 inches = 1 foot and 3 feet = 1 yard.
 - Select tools and units appropriate to the mass and capacity of the object being measured.
 - Measure mass, using grams and capacity using milliliters and liters.
 - Make change, using combined coins and dollar amounts.
 - Calculate elapsed time in hours and half hours, not crossing A.M./P.M.
 - Calculate elapsed time in days and weeks, using a calendar.
- ◆ Statistics and Probability Strand
- Design investigations to address a question from given data.
 - Collect and represent data using tables, bar graphs, and pictographs.
 - Read and interpret line graphs.
 - Develop and make predictions that are based on data.
 - Formulate conclusions and make predictions from graphs.