

GRADE 4
CURRICULUM GUIDE

**Invest in the Ultimate Future Technology ...
The Mind of a Child**



**L.J. Stevens Intermediate School
Wilmington School District #209-U
221 Ryan Street
Wilmington, IL 60481
815-926-1689
Updated 2020**

Dear Parents,

The Wilmington School District is dedicated to providing each student with a quality education. The mission of L.J. Stevens Intermediate School is to provide a nurturing environment in which students are offered the opportunity to learn the essential curriculum, which consists of the knowledge, skills and values that children need to become productive members of our society.

Our goals are to challenge students to reach their potential, to mature into lifelong learners and to become contributing members of the community. Parents play a significant role in achieving these goals. This guide was developed to familiarize parents with the skills taught at this grade level. Lifelong learning is the result of the combined efforts of the school, community, child, and family united for excellence in education. Please help us in making this goal of quality education a reality for your child.

Sincerely,

**Mrs. Venita Dennis
Principal
L.J. Stevens Intermediate School**



Biological and Physical Science Outcomes

In addition to the following standards, the Common Core Standards are taught in this curriculum area.

It is our goal that students will be able to –1.) Identify and apply patterns, structures and other organizational concepts to the world; -2.) Recognize and be able to differentiate between systems; -3.) Identify processes of life and formulate conclusions based on information characterized by those processes; -4.) Describe the interaction between two or more things, explain the influence they have upon each other, and assess that information as it applies to everyday life; -5.) Identify and examine the relationship between the natural and technological worlds; -6.) Distinguish between different types of natural resources and investigate society's responsibility for improving the environment situations; -7) Identify and describe the basic steps of the scientific method; -8.) Report and organize observations, measurements, and methods of data collection; -9.) Demonstrate the process of scientific methods to formulate conclusions; -10.) Set up and operate scientific equipment

Energy

- Use evidence to construct an explanation relating the speed of an object to the energy of that object.
- Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat and electric currents.
- Ask questions and predict outcomes about changes in energy that occur when two things collide
- Apply scientific ideas to design, test, and refine a device that converts energy from one form to another
- Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.

Waves and Information

- Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause object to move
- Generate and compare multiple solutions that use patterns to transfer information

Structure functions & Information Processing

- Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen
- Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction
- Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways

Earth's System; Processes that Shape the Earth

- Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time
- Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation
- Analyze and interpret data from maps to describe patterns of Earth's features
- Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans

Engineering Design

- Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost
- Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem
- Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved

Social Science Outcomes

It is our goal that students will be able to- 1) Develop questions and plan inquiries 2) Evaluate sources and use evidence 3) Communicate conclusions and take informed action 4) Understand political systems with an emphasis on the U.S. 5) Understand civics, economics and financial literacy 6) Analyze the geography of the United States 7) Learn about the history of Illinois and identify major events and influential people who shaped our state

Develop Questions and Plan Inquiries

- Construct essential questions
- Construct supporting questions
- Determine helpful sources

Evaluate Sources and Use Evidence

- Gather information and distinguish fact from opinion
- Develop claims and use evidence

Communicate Conclusions and Take Informed Action

- Communicate and critique conclusions through evidence, arguments, and listening
- Use procedures like voting to take informed actions to make changes

Understand Political Systems with an Emphasis on the United States

- Distinguish the responsibilities of: local, state and federal government
- Explain what a democracy is
- Identify core civic virtues such as: honesty, mutual respect, and cooperation
- Explain how people change rules and laws in Illinois

Economics and Financial Literacy

- Learn what economics is
- Understand supply and demand
- Explain that income can be saved, spent or used to pay taxes

Geography

- Learn the geographic representations in the U.S. (landforms)
- Describe human population and understand the effects it has on the environment in Illinois
- Describe global interconnections and why they are important

History of Illinois

- Explain connections among historical contexts and why individuals and groups differed in their perspectives during the same time period
- Investigate how individuals contributed to the founding and development of Illinois

Mathematics Outcomes

In addition to the following standards, the Common Core Standards are taught in this curriculum area.

It is our goal that students will be able to--1.) Read, write, name and order numbers and number patterns; -2.) Perform operations with numbers and apply properties of numbers and operations with and without calculators; -3.) Translate word problems to mathematical expressions or sentences and apply computational and problem solving skills to solve the sentences with and without calculators; -4.) Interpret, construct and solve ratios and proportions; -5.) Estimate and apply selected measurement systems, instruments and techniques in various contexts using appropriate units; -6.) Relate lengths, areas and volumes in common geometric figures; -7.) Compare and/or convert units within one system and from one system to another; -8.) Solve equations and inequations; -9.) Understand and apply the various techniques of graphing; -10.) Recognize geometric figures; -11.) Apply geometric relationships; -12.) Design and interpret tables, charts and/or graphs; -13.) Make comparisons based on tables, charts and /or graphs; -14.) Estimate answers for reasonableness; -15.) Estimate and predict outcomes.

Geometry

- Draw points, lines, line segments, rays, angles, and perpendicular, parallel lines
- Identify, classify two- dimensional figures, recognize right triangles as a category, and identify right angles.
- Recognize a line of symmetry for a two-dimensional figure, identify line- symmetric figures, and draw lines of symmetry.

Measurement & Data

- Know relative sizes of measurement units, express measurements in a larger unit, record equivalent measurements, generate a conversion table. Specific units of measurement will include; km, m, cm, kg, g, lbs., oz., l, ml. hr., min. sec.
- Use four operations to solve word problems involving distances, intervals of time, volumes, masses of objects and money. This will include fractions or decimals and specific units. Represent measurements using diagrams.
- Make, interpret, and solve problems using line plots
- Apply area and perimeter formulas in real world problems.

- Measure angles in whole number degrees using a protractor, Sketch angles of specified measures
- Recognize angle measure as additive. Solve addition and subtraction problems to find unknown angles
- Recognize and understand angles as geometric shapes that form when two rays share a common endpoint. Understand concepts of angle measurements
 - An angle is measured with reference to a circle
 - An angle that turns through $1/360$ of a circle is called a “one –degree angle”
 - An angle that turns through $n/$ one-degree angle is said to have an angle measure of $n/$ degree

Numbers and Operation Fractions

- Add and subtract mixed numbers with like denominators
- Solve word problems involving addition and subtraction of fractions referring to the same whole and having like denominators
- Apply and extend previous understanding of multiplication to multiply a fraction by a whole number
- Understand a fraction a/b as a multiple of $1/b$
- Understand a multiple of a/b as a multiple of $1/b$, and use this understanding to multiply a fraction by a whole number
- Solve word problems involving multiplication of a fraction by a whole number.
- Express a fraction with denominator 10 as an equivalent fraction with denominator 100, and use this technique to add two fractions with respective denominators 10 and 100.
- Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols $<$, $=$, or $>$, and justify the conclusions

Numbers and Operations Base Ten

- Read and write multi-digit whole numbers using base-ten numerals, number names and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $<$, $=$, $>$ symbols to record the result comparison.
- Use place value understanding to round multi-digit whole numbers to any place
- Fluently add and subtract multi-digit whole numbers using the standard algorithm
- Multiply a whole number of up to four digits by a one-digit or two-digit number, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area model.
- Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.
- Find whole-number quotients and remainder with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Operations & Algebraic Thinking

- Interpret a multiplication equation as a comparison, represent verbal statements of multiplicative comparisons as multiplication equations.
- Multiply or divide to solve word problems involving multiplicative comparisons.
- Solve multistep word problems posed with whole numbers and having whole-number answers using the four operations, including problems in which remainders must be interpreted. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
- Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given number, and if that number is prime or composite.
- Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself.

Character Education

The Wilmington School District wants to ensure that values protecting human worth and dignity are understood and accepted by our students. A character education program is integrated into every area of the curriculum. The program emphasizes the values of:

- **1st Trimester: Respect, Caring, and Fairness**
- **2nd Trimester: Responsibility and Trustworthiness**

- **3rd Trimester: Citizenship and Perseverance**

In addition to the monthly values, we have implemented Second Step: A Violence Prevention Curriculum. This engaging social and emotional learning program uses hands-on, activity based lessons to help children gain language and communication skills while learning to identify feelings, solve problems, and get along with others

Instruction Technology Outcomes

As a result of their fourth grade schooling, students will be able to meet or exceed the state and national standards:

The skills we are reinforcing...

Basic Operations, Concepts, and Skills

How to add a user to chromebooks* (mastered)

How to identify ports and accessories that can be plugged into devices

How to utilize desktop shortcuts

How to utilize proper technological terminology

Keyboarding Skills

How to identify/demonstrate proper home row placement*

Manipulate mouse, touchpad, or trackpad

How to properly use the left and right mouse operations

Google Docs

How to insert and manipulate images

Google Slides

How to create a slideshow presentation

How to add additional slides

How to manipulate the presentation theme

How to manipulate the slide layout

How to add transitions, animations, and timing

How to utilize editing tools (copy, cut, paste, etc)

How to utilize formatting tools (font, color, size, etc)

How to utilize toolbar functionality

How to use spell check

How to insert and manipulate images, videos, and hyperlinks on slides

How to present a slideshow

Google Classroom

How to successfully log in to Google Classroom to access assignments

How to connect to a Google Meet (mute themselves, pin a speaker, use the chat)

How to find and utilize classroom links posted in classroom

Research, Decision Making, and Problem Solving

How to evaluate and choose valid, accurate, relevant, and age appropriate resources

Internet Skills

How to add favorites or bookmarks

How to utilize address/search bar or Omnibox
How to use web based applications and understand their purpose

Responsible Use and Safety

How to recognize and respect the value of technological equipment
How to identify proper care, handling, and transportation of devices

The skills we are introducing...

Google Slides

How to add background images
How to print slideshow presentation
How to share slideshow presentation

Research, Decision Making, and Problem Solving

How to determine reliability and appropriateness of information

Responsible Use and Safety

How to practice appropriate digital citizenship*
How to use the nine elements of digital citizenship*
How to identify and raise awareness of cyber bullying
How to deal with social media situations

Language Arts Outcomes

In addition to the following standards, the Common Core Standards are taught in this curriculum area.

It is our goal that students will be able to do the following in:

Reading: 1) Read for various purposes, identify text to accomplish each purpose, and recognize, recall, summarize, predict, compare and contrast; 2) Infer to achieve understanding and integrate information from more than one text; 3) Justify and explain answers to questions about material read.

Listening: 1) Identify meaning of and sequence ideas from spoken messages; Distinguish among different purposes in communication and different perspectives and point of view.

Writing: 1) Use appropriate language and style in writing for a variety of purposes and audiences; 2) Develop and maintain a focus with a clear thesis, a main idea, theme of unifying events; use specific information or reasons to support and elaborate the main point; organize ideas in a clear, coherent, logical manner; and use standard written English conventions.

Speaking: 1) Speak effectively for a variety of purposes using language appropriate to audience and setting; 2) Present ideas in an orderly manner, including an appropriate introduction, elaboration and conclusion, ideas must be developed and supported by appropriate materials.

Literary Forms 1) Identify the differences among poetry, drama, fiction, and works that manifest different cultures; 2) Analyze selected literary works and support conclusions with evidence.

Literature/Reading

- Identify main idea/supporting details/identify story elements such as character, setting, plot, and theme
- Sequence
- Make inferences/predictions
- Know grade appropriate vocabulary; work with words
- Read a passage/story and answer questions pertaining to the story
- By the end of the year be able to read and comprehend informational texts

- Read fluently with accuracy to support comprehension
- Use text features (charts, maps, graphs, diagrams, time lines, etc.) to explain how the information contributes to the understanding of the text

Language

- Demonstrate command of conventions of standard English grammar when writing or speaking
- Form and use prepositional phrases, adjectives, pronouns, adverbs
- Produce compound and complex sentences
- Use correct capitalization and punctuation
- Spell grade level words correctly
- Use grade appropriate Greek and Latin affixes and roots
- Consult reference materials (both print and digital) to clarify meaning
- Understand metaphors, similes, idioms, adages, proverbs, synonyms, and antonyms

Speaking and Listening

- Follow verbal directions
- Respond appropriately to different kinds of oral communication
- Correctly restate information given written and oral
- Participate in oral discussions/brainstorm ideas/engage effectively in a range of collaborative discussions
- Tell a story in sequence, recount an experience
- Maintain focus on a central idea when speaking
- Follow and state verbal ideas clearly/be able to paraphrase

Writing

- Write expository, persuasive, and narrative texts to examine a topic and convey ideas and information clearly
- Strengthen writing as needed by planning, revising, and editing
- Use both standard English and conventions as you introduce topics clearly and relate information in paragraphs with facts, definitions, examples, etc. Provide reasons supported by facts and details
- Use technology to produce and publish writing

Physical Development and Health

It is our goal that students be able to:

Development, Structure, Functions of Human Body –1.) Demonstrate an understanding of the immediate and long-term effects of exercise and lack of exercise on the body –2.) Demonstrate an understanding of the basic structures and functions of the body necessary for safe, improved and skillful physical performance.

Nutrition, Exercise, Stress, Self-concept –1.) Discuss/apply principles of nutrition and exercise; -2.) Discuss/apply concepts related to the management of stress and the development of positive self-image.

Consumer Health and Safety –1.) Demonstrate safety as related to equipment and services for physical activity; -2.) Demonstrate safety procedures for a variety of situations; -3.) Discuss health issues as related to the environment.

Physical Fitness –1.) Demonstrate basic physical skills and physical fitness; -2.) Demonstrate basic skills of various games, activities and sports

Personal Fitness and Health –1.) Develop/demonstrate a physical fitness program.

Motor Activities –1.) Create, perform and evaluate a combination of safe movement sequences for a variety of activities; -2.) Demonstrate/discuss appropriate rules, strategies and skills for selected games, activities and sports.

Basic Life-Saving Skills –1.) Demonstrate life-safety and life-saving skills in a variety of situations

Physical development and health instructors stress the following:

- Units on manipulatives such as sports, ball handling, jump roping and dance
- Daily instruction in correct body movements to perform tasks safely and efficiently. Safety is always stressed, and the children learn the safety rules that go with each game, sport or activity
- Learn to perform age-appropriate tasks
- Learning about exercising and its effect on the cardiovascular system. Students actually learn how to take their heart rate. Each sport incorporates safe warm-up exercises. Flexibility, strength, coordination, balance and agility are covered. Students learn about harmful exercises.
- Learning about the safe use of the body and equipment.
- Learning about a variety of indoor and outdoor activities via units that teach required skills and assess those skills with performance and objective tasks.
- Perform several dances.

Music Outcomes

It is our goal that students be able to: -1.) Know the language of music; -2.) Understand how music is produced through creating and performing; -3.) Understand the role of music in civilizations, past and present

Identify Differences in Elements and Expressive Qualities:

- Tone color, melody, harmony, form, rhythm/meter, dynamics, expression of ideas

Classify musical sound sources into groups

- Instrumental families, vocal ranges, solo/ensembles

Create and Perform Music

- Sing, play acoustic or electronic instruments, use a variety of musical styles from diverse cultures, understand processes involved in composing and conducting

Identify How Music Contributes to History, Society and Everyday Life

- Home, school, workplace, concerts, commercial applications communicate similarities and differences among people, places and times

Read and Interpret Traditional Music Notations

- Note values, letter names