LEXINGTON PUBLIC SCHOOLS

K-5 Curriculum Benchmarks

Distributed by the Office of
K-12 Curriculum and Instruction

K-5 Literacy

The Lexington Public Schools kindergarten- grade five literacy benchmarks represent the standards that students are expected to achieve by the end of each grade level. These standards are derived from the 2011 *MASSACHUSETTS CURRICULUM FRAMEWORK FOR*

Kindergarten

Benchmarks for Kindergarten Readers

In Kindergarten, the expectation is that students are interacting with many and varied types of text. The student understands texts read aloud, reads grade-level texts, and responds critically to develop understanding and expertise. These reading behaviors may be demonstrated during read aloud, shared reading, guided reading, writing, and/or independent reading.

- Demonstrates an understanding of the organization of text
- Demonstrates an understanding of spoken word, syllables, and sounds
- Applies kindergarten phonics and word analysis skills
- Asks and answers questions about key details in a text
- Comprehends a variety of genres: informational, literature, poetry
- Engages with grade-level texts with purpose and understanding

Benchmarks for Kindergarten Writers

The student begins to develop personal style as a writer, acquires a way of thinking about writing, revisits writing, and understands purposes for writing. The student produces various types of writing and uses appropriate punctuation, capitalization, spelling, handwriting, and grammar in writing.

Grade 1

Grade 2

Benchmarks for Grade 2 Readers of Literature and Informational Text

The student reads second grade texts and responds critically to develop understanding and expertise.

- Applies second grade phonics and word analysis skills
- Reads common high-frequency words
- Reads and comprehends a variety of genres
- Asks and answers questions to demonstrate understanding of key information in a text
- Demonstrates an understanding of story structures
- Reads second grade texts with purpose and understanding

Grade 3

Benchmarks for Grade 3 Readers of Literature and Informational Text

The student reads third grade-level texts with fluency and understanding and responds critically to develop understanding and expertise.

Knows and applies third grade phonics and word analysis skills
Asks and answers questions about important concepts and key details in a text
Demonstrates an understanding of story structures
Determines main idea of a text, cites details to support conclusion
Summarizes important ideas and details of a text
Knows and uses text features and search tools to locate key information
Reads and comprehends a variety of genres
Reads third grade texts with purpose and understanding

Benchmarks for Grade 3 Writers

The student develops a personal style as a writer. The student acquires a way of thinking about writing, revisits writing, and produces various types of writing. He or she demonstrates understanding of grade-level punctuation, capitalization, spelling, handwriting, and the various purposes and audiences for writing.

Writes informative/explanatory texts to examine a topic and convey ideas and information clearly
Writes narratives to develop real or imagined experiences or events using effective techniques, descriptive details, and clear event sequences
Develops and strengthens writing as needed by planning, revising, and editing
Conducts short research projects about a topic
Gathers information, takes notes, and sorts information

Benchmarks for Grade 3 Speakers and Listeners

The student speaks, listens, and views effectively in formal and informal situations, and uses language appropriate to the situation and audience.

Asks and answers questions to seek help, get information, or deepen understanding
Reports on a topic or text with facts and descriptive details
Speaks effectively, adapting speech to a variety of context and tasks

Benchmarks for Grade 3 Language

The student demonstrates an understanding of third grade punctuation, capitalization, spelling, handwriting, grammar, and vocabulary development. The student uses multiple reference tools to acquire new knowledge and make informed decisions.

Uses knowledge of English and its conventions when writing, speaking, reading
Determines or clarifies the meaning of unknown words and phrases
Spells high-frequency and studied words correctly
Uses learned spelling patterns

Grade 4

Benchmarks for Grade 4 Readers of Literature and Informational Text

The student reads fourth grade-level texts with fluency and understanding and responds critically to develop understanding and expertise.

Summarizes important ideas and details in a text
Determines the theme of a text
Makes logical inferences through critical reading and thinking
Demonstrates an understanding of multiple text structures
Integrates information from related texts
Reads and comprehends a variety of genres
Reads fourth grade text with purpose and understanding

Benchmarks for Grade 4 Writers

The student develops personal style as a writer. The student acquires a way of thinking about writing, revisits writing, and produces various types of writing. He or she demonstrates an understanding of fourth grade-level punctuation, capitalization, spelling, handwriting, and the various purposes and audiences for writing.

Writes opinion pieces on topics or texts supporting a point of view with reasons and information
Writes information/explanatory texts to examine a topic and convey ideas and information clearly
Writes narratives to develop real or imagined experiences or events using effective technique, details, and clear event sequences
Plans, drafts, revises, and edits product clear and coherent writing
Plans for research by identifying topics and/or generating focus questions
Gathers relevant information from multiple print and digital sources
Writes with an understanding of various purposes and audiences

Benchmarks for Grade 4 Speakers and Listeners

The student speaks and listens effectively in formal and informal situations and uses language appropriate to the situation and audience.

Engages effectively in a range discussions
Identifies the evidence a speaker provides to support particular points
Expresses ideas or recounts an experience in an organized manner with facts and descriptive details
Speaks effectively, adapting speech to a variety of context and tasks

Benchmarks for Grade 4 Language

The student demonstrates an understanding of fourth grade punctuation, capitalization, spelling, handwriting, grammar, and vocabulary development. The student uses multiple reference tools to acquire new knowledge and make informed decisions.

x Uses knowledge of English and its conventions when writing, speaking, reading
Determines or clarifies the meaning of unknown words and phrases
Spells high-frequency and studied words correctly
Uses learned spelling patterns when writing

Grade 5

Benchmarks for Grade 5 Readers of Literature and Informational Text

The student reads fifth grade-level texts with fluency and understanding and responds critically to develop understanding and expertise.

Knows and applies fifth grade phonics and word analysis skills
Reads and comprehends a variety of genres
Reads fifth grade texts with purpose and understanding
Summarizes important ideas and key details in a text
Makes logical inferences through critical reading and thinking using explicit information from a text
Demonstrates an understanding of multiple

K-5 Mathematics

The elementary mathematics program is aligned with the

Kindergarten

Kindergarten Content Standards

In Kindergarten, the focus of student learning is on two areas:

1. Representing, relating, and operating on whole numbers with sets of objects and numerals
2. Describing shapes and space

Counting and Cardinality

Knows the number names and the count sequence to 100
Counts to 100 by tens
Counts to tell the number of objects to 30+
Compares numbers to 10 (greater than, less than, equal to)
Reads and writes numerals to 20

Operations and Algebraic Thinking

Demonstrates an understanding of addition as putting together and adding to
Demonstrates an understanding of subtraction as taking apart and taking from
Solves addition story problems within 10 with objects or drawings
Solves subtraction story problems within 10 with objects or drawings

Number and Operation in Base Ten

Uses objects and drawings to demonstrate an understanding that the numbers 11-19 are composed of a ten and ones

Measurement and Data

Describes and compares measurable attributes such as length and weight
Classifies objects and counts the number of objects in categories

Geometry

Identifies and describes two- and three-dimensional shapes
Analyzes, compares, creates and composes shapes
Describes the relative position of objects using terms (above, below, beside, in front of, behind, and next to)

Grade 3

Grade 5

K-5 Science and Technology/Engineering

The K-5 units of study integrate the disciplines of life, Earth and space, physical science, and technology/engineering. The curriculum supports opportunities for students to ask questions and solve problems, learn by doing, interact with one another and build their scientific knowledge over

authentic integration opportunities across the content areas.
Big Backyard, connect students and learning to their natural environment.

The elementary science program is aligned with the 2016 Massachusetts Curriculum Framework. At each grade level, students engage in the **Science Practices** that span kindergarten through grade twelve. The practices help describe the behavior of scientists as students investigate and build understanding about the world. The **Engineering Practices,** likewise, help students understand the work of engineers as well as the links between engineering and science.

Science, Technology and Engineering Practices

Asking questions and defining problems - A practice of science is to ask and refine questions that lead to descriptions and explanations of how the natural and designed world works and which can be empirically tested.

Developing and Using Models - A practice of both science and engineering is to use and construct models as helpful tools for representing ideas and explanations. These tools include diagrams, drawings, physical replicas, mathematical representations, analogies, and computer simulations.

Planning and Carrying Out Investigations - Scientists and engineers plan and carry out investigations in the field or laboratory, working collaboratively as well as individually. Their investigations are systematic and require clarifying what counts as data and identifying variables or parameters.

Analyzing and Interpreting Data - Scientific investigations produce data that must be analyzed in order to derive meaning. Because data patterns and trends are not always obvious, scientists use a range of tools including tabulation, graphical interpretation, visualization, and statistical analysis

K-5 Content Focus

The **Content Standards** are grade-specific and focused on a limited set of disciplinary core ideas that build across grades and lead to conceptual understanding and application of concepts.

Kindergarten

Exploring Seasons

collects data on weather conditions throughout the year to describe patterns over time
uses words and symbols to describe the weather

observes and describes how weather changes throughout the year impact plants and animals found in the schoolyard
designs a shelter for an organism to provide protection throughout the seasons

Exploring Plants and Animals

observes and describes the needs of living things
observes, identifies and describes some life processes of animals: breathing, movement, taking in nourishment, growth and reproduction
distinguishes plant parts such as roots, stems, leaves, flowers and seeds
distinguishes between things that are alive and things that are not alive
recognizes that plants and animals can change their environment

Exploring Water

uses observable properties to describe water
describes, groups, and classifies objects by their properties
recognizes that water can be a solid or liquid depending on temperature
identifies water as essential for plants and animal survival
recognizes that water is one component that makes up weather

Grade 1

Grade 3

Water In Our World, Water, Weather and Climate

describes how water can be changed from one state to another by adding or taking away heat

Grade 4

Earth's Materials

makes observations and conducts tests to identify minerals according to their properties
recognizes that rocks are made up of minerals
describes the origin of igneous, sedimentary and metamorphic rocks
identifies evidence within a landscape of the processes involved in creating and shaping the

analyzes and interprets maps of
location of earthquakes and volcanoes to describe patterns of these features and their locations relative to boundaries between continents and oceans
uses fossils to describe types of organisms and their environments that existed long ago
researches information to describe that energy and fuels humans use come from natural resources and some energy and fuel sources are renewable and some are not

A Focus on Energy

in terms of motion energy, thermal energy and electrical energy
develops and uses models, drawings and representations to describe energy flow and transformation in a scenario
uses evidence to construct an explanation that an object can have different amounts of motion energy, depending on its speed
asks questions and predicts outcomes about the changes in energy that occur when objects collide
makes observations to collect evidence that energy can be transferred from one object to another
collects and analyzes data to reason about increases and decreases of energy and transfer between materials and to the environment

An Introduction to Elementary Robotics

works in a small group to design, build, program, test and redesign a robot to solve a problem
develops and compares multiple ways to transfer information through encoding and decoding a program for a robot to follow
plans and carries out tests of one or more design features of a given model in which variables are controlled and failure points are considered to identify which features need to be improved
applies the results of tests to redesign a model
evaluates relevant design features that must be considered in building a model of a solution to a given design problem

Grade 5

Ecosystem Interactions

uses a model of an ecosystem to describe the transfer of energy through a food chain and the movement of matter among producers, consumers, decomposers and the environment

explores the diversity of ecosystems found on Earth and the natural and human threats that can impact ecosystems

obtains and communicates information about ways communities can reduce the impact on the Earth's resources and environment by changing a practice or process

Keeping Track of Matter

develops and uses a model of a mini-lake to investigate concepts of weight, volume, and *heaviness for size* (the term used in place of *density*

K-5 Social Studies

Grade 1

Grade 3

Massachusetts and its Cities and Towns: Geography and History
Using local historic sites, historical societies, and museums, third graders learn about the history of Massachusetts from the time of Naïve groups like the Wampanoag and the arrival of the Pilgrims. They also learn the history of Lexington and about famou
history, especially in the time period leading up to the American Revolution. In addition, they read biographies of prominent people in science, technology, the arts, business, education, or political leadership in order to learn how they contributed to our society**.**

Gives examples of why it is necessary for communities to have rules and laws
Gives examples of the ways people in a community can influence their local government (e.g. voting, running for office, participating in meetings)
Uses cardinal directions, map scales, legend and titles to locate continents, countries, states, towns, landforms, and bodies of water on contemporary maps of the world, New England, and Massachusetts
L res, and historical landmarks on a map, and explains their significance
Identifies the Wampanoag people and describes their way of life in the mid-1600s
Identifies who the Pilgrims were and describes their early years in Plimoth Colony
Describes the roles that various leaders played in the events leading up to the signing of the

K-5 Performing Arts Benchmarks

Curriculum is under review and will be updated in the future.

Performing, creating, and responding to music are the fundamental music processes in which humans engage. Students, particularly in grades K-5, learn by doing. Singing, playing instruments, moving to music, and creating music enable them to acquire musical skills and knowledge that can be developed in no other way. Learning to read and notate music gives them a skill with which to explore music independently and with others. Listening to, analyzing, and evaluating music are important building blocks of musical learning. Further, to participate fully in a diverse, global society, students must understand their own historical and cultural heritage and those of others within their communities and beyond. Because music is a basic expression of human culture, every student should have access to a balanced, comprehensive, and sequential program of study in music.

This document describes the cumulative skills and knowledge expected of all students from Kindergarten through the end of grade 5. Students will engage in developmentally appropriate learning experiences designed to prepare them to progress through the standards. Determining the specific instructional activities necessary to achieve the standards is the responsibility of individual teachers.

Kindergarten

Grade K students will engage in:

1. *Singing, alone and with others, a varied repertoire of music*
   a. Demonstrate the difference between speaking and singing voice
   b. Demonstrate the difference between high and low vocal production
   c. Sing independently and in groups
   d. Sing, from memory, a varied repertoire of songs

2. *Performing on instruments, alone and with others, a varied repertoire of music*
   a. Play instruments with a steady beat

Grade 1

Grade 1 students will engage in:

1. *Singing, alone and with others, a varied repertoire of music*
   a. Echo simple melodic phrases
   b. Demonstrate control over loud and quiet vocal production
   c. Respond to conductor cues
   d. Sing, from memory, a varied repertoire of songs.

2. *Performing on instruments, alone and with others, a varied repertoire of music*
   a. Play instruments with a steady beat
   b. Echo and perform basic rhythmic patterns
   c. Demonstrate contrasts on instruments (high and low, loud and quiet, fast and slow, up and down)
   d. Demonstrate basic instrumental technique

3. *Improvising melodies, variations, and accompaniments*
   N/A at this level

4. *Composing and arranging music within specified guidelines*
   N/A at this level

5. *Reading and notating music*
   a. Read quarter notes and quarter rests

6. *Listening to, analyzing, and describing music*
   a. Respond through purposeful movement to selected musical characteristics or to specific music events while listening to music
   b. Demonstrate perceptual skills by moving, by answering questions about, or by describing aural examples of music

7. *Evaluating music and music performances*
   N/A at this level

8. *Understanding relationships between music, the other arts, and disciplines outside the arts*
   a. Identify ways in which principles and subject matter of other disciplines taught in the school relate to those of music

9. *Understanding music in relation to history and cul history andEMC /P (<mW*nBT/F2 11.4Tf1 0 0 1 9.144 46 Tm0 g0 G[]TETQ

Grade 3

Grade 3 students will engage in:

1. *Singing, alone and with others, a varied repertoire of music*
   a. Sing songs with independent parts (ostinati, rounds, and partner songs)
   b. Sing expressively with appropriate dynamics and articulation
   c. Respond to conductor cues
   d. Sing, from memory, a varied repertoire of songs

2. *Performing on instruments, alone and with others, a varied repertoire of music*
   a. Play recorder and other instruments on pitch, in rhythm, with appropriate dynamics and timbre, and maintain a steady tempo
   b. Perform easy rhythmic and melodic patterns accurately and independently on pitched and unpitched classroom instruments
   c. Perform expressively a varied repertoire of music
   d. Echo short rhythms and melodic patterns
   e. Perform in groups, blending instrumental timbres, matching dynamic levels, and responding to the cues of a conductor
   f. Perform independent instrumental parts while other students sing or play contrasting parts

3. *Improvising melodies, variations, and accompaniments*
   a.
   b. S 5SdBT/F1 11.04 Tf1 0 0 1 122.42 705.46 Tm0 g0 G[R)4(es)-3(pond)11(t)-4(o co)9(nduc)9(t)-4(or)7(cu

Grade 4

Grade 4 students will engage in:
1.

Grade 5

Grade 5 students will engage in:

1. *Singing, alone and with others, a varied repertoire of music*
   a. Sing accurately and with good timbre, diction, posture, and breath control throughout their singing ranges, alone and in small and large ensembles
   b. Sing with expression and technical accuracy a repertoire of vocal literature, including some songs performed from memory.
   c. Sing from memory music representing diverse genres and cultures, with expression appropriate for the work being performed.
   d. Sing music written in two and three parts, which can include ostinati, partner songs, and rounds.

2. *Performing on instruments, alone and with others, a varied repertoire of music*
   a. Perform on pitch, in rhythm, with appropriate dynamics and timbre, and maintain a steady tempo
   b. Perform easy rhythmic, melodic, and chordal patterns accurately and independently on pitched and unpitched classroom instruments
   c. Perform expressively a varied repertoire of music representing diverse genres and styles
   d. Echo rhythms and melodic patterns
   e. Perform in groups, blending instrumental timbres, matching dynamic levels, and responding to the cues of a conductor
   f. Perform independent instrumental parts while other students sing or play contrasting parts

3. *Improvising melodies, variations, and accompaniments*
   a. Improvise "answers" in the same style to g
   b. Improvise simple rhythmic and melodic ostinato accompaniments
   c. Improvise simple rhythmic variations on familiar materials
   d. Improvise short pieces, using a variety of sound sources, including traditional sounds, nontraditional sounds available in the classroom, body sounds, or sounds produced by electronic means

4. *Composing and arranging music within specified guidelines*
   a. Create and arrange music to accompany readings or dramatizations
   b. Create and arrange short songs or instrumental pieces within specified guidelines
   c. Use a variety of sound sources when composing

5. *Reading and notating music*
   a. Read whole, half, dotted half, quarter, dotted quarter, and eighth notes and rests
   b. Read simple pitches in the treble clef using a notation system
   c. Identify symbols and traditional terms referring to dynamics, tempo, meter, and articulation and interpret them correctly when performing
   d. Use standard symbols to notate rhythm and pitch in simple patterns presented by the teacher.

6. *Listening to, analyzing, and describing music*
   a. Identify simple music forms when presented aurally
   b. Demonstrate perceptual skills by moving, by answering questions about, and by describing aural examples of music of various styles representing diverse cultures
   c. Use appropriate terminology in explaining music, music notation, music instruments and voices, and music performances
   d.

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9. *Understanding music in relation to history and culture*

a.

MVAS Standard 2: **Elements and Principles of Design**
Students will demonstrate knowledge of the elements and principles of design.
NVAS Standard 1: Creating: Conceiving and Developing New Artistic Ideas and Work

	Kindergarten	1st Grade	2nd Grade	3rd Grade	4th Grade	5th Grade
Color & Value (MVAS 2.1, 2.7)	Students will identify and mix primary and secondary colors	Students will identify warm and cool color families	Students will identify neutral color families	Students will identify and mix complementary colors	Students will learn to mix tints and shades to create value	Students will apply their

K-5 Library and Information Technology

These Standards, Objectives and Benchmarks are adapted from standards developed by the following groups: the 21st Century Learner ; the Iowa City Community Schools Library Programs and Kansas Library Media Standards; the I-Sail Illinois Standards - Aligned Instruction for Libraries 2011; and the Lexington Public Schools Library Benchmarks, 2012 edition.

Kindergarten - Grade 1

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

Benchmark:

A. Locate parts of a book
B. Understand basic organizational pattern of library

Objectives:

1. Identify title, author, illustrator, cover, and spine

Standard 4: Appreciate literature and pursue information related to **personal interests**

Cultivate a love of reading and become a self-motivated reader
Develop knowledge of genres and literary elements
Derive meaning from information presented creatively in a variety of formats

Benchmark:

A. Use both auditory and visual clues to understand literature
B. Select an appropriate book of interest for personal enjoyment
C. Begin to identify different types and elements of literature
D. Ask for assistance when seeking information

Objectives

1. Select a "Just Right" book independently for personal reading
2. Listen to traditional folklore (nursery rhymes, fairy tales, myths and legends)
3. Listen to or read various types of fiction and nonfiction
4. Identify literary elements such as character and setting
5. Practice literature response through basic discussion and other participatory activities
6. Engage with the work of various authors and illustrators
7. Begin to develop awareness of award-winning literature
8. Begin to recognize text in various formats
9. Appreciate reading for pleasure, for learning, and for finding answers
10. Use library resources and interact with library staff appropriately

Standard 5: Understand and practice using the Internet safely and wisely for educational, social, or recreational purposes

Understand the need for protecting personal privacy when using public access to digital sources
Protect personal information and electronic devices in an online environment

Grades 2-3

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

Benchmark:

A. Begin to access information from a variety of sources
B. Understand the concepts of title, author, and keyword in locating library materials with teacher guidance.

Objectives:

1. Define difference between fiction and nonfiction
2. Recognize call number and begin to understand grouping of materials by call number
3. Begin to use reference materials in all formats recognizing unique features of each
4. Begin to use features, of nonfiction texts such as table of contents, index, captions and diagrams
5. Identify keywords and/or search terms with teacher guidance
6. Locate materials on library shelves by call number with teacher guidance

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

Benchmark:

A. Differentiate between fact and fiction
B. Identify appropriate sources of information

Objectives:

1. Begin to select the most appropriate source to fulfill the information need
2. Use paraphrasing in note taking
3. Learn to compare content and ideas in different resources
4. Learn to choose what facts and details to include in note taking
5. Use nonfiction text features to identify important information and understand content
6. Learn common organizational patterns to make sense of information

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 knowledge
Applies information to critical thinking and problem solving
Practice ethical behavior when using resources in all formats
Produce and communicate information and ideas in appropriate formats
Participate appropriately and productively in collaborative activities

Benchmark:

A. Organize and communicate results of information search in format appropriate for content
B. Recognize ownership of sources of information
C. Observe Internet guidelines and protocols as defined in the district's policies.
D. Explain and exhibit appropriate group conduct

Objectives:

1. Begin to differentiate between note taking and plagiarism
2. Use basic graphic organizers to record information with support
3. Share and evaluate the results of the information search
4. Recognize the need for citing sources and record simple citations
5. Use pre-selected digital sources for information needs
6.

Objectives:

1. Demonstrate an understanding of the difference between note taking and plagiarism
2. Organize information using a variety of techniques
3. Recognize the need for citing sources and create works cited list
4.