Marlborough Elementary School

Academic Program Guide

2022 - 2023

Introduction

MES Vision

To inspire wonder, awe, and curiosity and to motivate young minds to embrace learning

At MES, we aspire to create learner-centered conditions where students are active in their acquisition of knowledge, thinking out loud as they build meaning, ask questions, and explain their reasoning. We hold high expectations for all students and progress is monitored regularly so that appropriate instructional and programmatic adjustments can be applied in a timely manner.

In educating the whole child, our goal is for each child to develop academically as well as socially-emotionally and to their fullest potential by providing a happy, joyful learning environment while focusing upon implementing curriculum and enhancing student progress.

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The Marlborough Elementary School *Academic Program Guide* has been created to deepen the bond between school and families by providing details about our academic program in all areas and at each grade level. The *Guide* provides an overview of the year by grade level. Some grade levels may instruct topics at varying points in the year, especially in the areas of Science and Social Studies.

The *Guide* begins with an overview of the Essential Arts (Specials) program and is followed by a grade-by-grade description of core academics.

Literacy sections outline the journey from beginning readers and writers, to the analytical, literary essayists of our sixth graders. The Pre K to 3rd grade daily literacy block includes three main components - foundational skills, engaging with complex text, and writing. Our students' oral language develops through explicit instruction in all areas of the core literacy block. Our PreK, Kindergarten and 1st grade teachers use the Heggerty Curriculum to provide a well-articulated phonemic awareness program. The *Fundations* Program in grades K-3 provides a strong basis for phonetic knowledge, which helps children learn to decode as well learn spelling patterns. The knowledge component of our reading program is crafted to offer students a wide range of literature, non-fiction and fiction, to help students learn about their world and develop perspective and points of view.

The Math section describes the progression from foundational numeracy concepts to solving real life math problems. Our school utilizes the *enVision 2020* Math Program as the basis of instruction, supplemented with math games and Number Talks. The 2022-2023 school year will be our first year utilizing the *Reflex* on-line math program to assist in building mathematical fluency skills.

Science instructional content, aligned to the Next Generation Science Standards (NGSS), is outlined for each grade level. Our youngest scientists experience instruction which builds conceptual knowledge and skills through a variety of experiments and texts, supplemented with *Mystery Science* (www.mysteryscience.com). Upper grades students expand their science knowledge through experiments, informational texts, and an online lab/media based interface (www.mosamack.com).

Social Studies instruction is drawn from the national C3 Framework (College, Career and Civic Life) and the Connecticut Social Studies Framework. Through a K-6 exploration of topics in the four disciplines of civics, economics, geography and history, children build their knowledge of themselves and their family's, information about their school and local community as well as our state and nation. Our sixth graders explore Europe, Latin America and Africa. Social Studies instruction provides an integrated opportunity to expand and apply literacy and numeracy skills.

Essential Arts ("Specials")

Health

Health Education is a planned program of learning experiences which prepares students to lead a healthy lifestyle. Our program, grounded and guided by state standards, empowers students to develop self-awareness and skills for effective decision making. The program increases knowledge of health and personal safety issues and encourages the development of positive health habits, thus enabling students to make informed decisions regarding their emotional, social and physical health.

World Language/Spanish

Our World Language program is designed to motivate, inspire and challenge students to become contributing members of a global society. Launching a second language acquisition process for young, enthusiastic learners provides the opportunity for them to acquire the ability to communicate in another language and gain an understanding of other cultures. Instructional strategies include interactive activities in the target language.

Music

Elementary music uses speech, movement, song, instruments and listening activities to develop musical skills (melodic, rhythmic) and music concepts (expressiveness and connection to art forms) in relation to national standards. A variety of aural and visual media are used to develop each child's maximum musical potential. MES music lessons are built on the philosophy that children build musical appreciation and knowledge by listening, creating and performing.

Performance opportunities in grades 3 through 6th include:

- Grade 3 & 4 chorus
- Performing in recorder ensemble (grade 3)
- Grade 5 & 6 chorus (as well as a select chorus)
- Instrumental lessons & ensemble for standard band instruments (grades 4 through 6)

Visual Arts

Art education develops critical thinking skills. Through a variety of artistic activities, students cultivate their thoughts on the world through visual representations. Using the Elements of Art and the Principles of Design, students have opportunities to express what they know, feel, think and imagine. Visual art unites the perceptual, intellectual and creative processes.

Students begin building an artistic foundation in kindergarten. That foundation is further developed and strengthened in each year that follows. Students develop art vocabulary as well as learn how to decipher the work of others. They create personal work fortified with knowledge from history and cultures to clearly communicate their own ideas. Students are provided with opportunities to exhibit their work and participate in state contests and national and international forums.

Physical Education

Physical education classes guide students through a wide range of units and activities that will enable them to grow physically, socially and emotionally. Units have an emphasis on meeting individual needs of students and provide them with a foundation that allows them to be physically active throughout their lives.

Kindergarten, 1st and 2nd grades: Locomotor movement, throwing/catching, volleying, balance, parachute, fielding, tumbling, bowling, scooters, "striking" (racquet sports), basketball, Trestle Tree, soccer

3rd & 4th grades: Throwing/catching, volleying, fitness testing, team activities, locomotor movement, lacrosse, bowling, scooters, "striking" (rackets, bats, sticks), basketball, Trestle Tree, soccer, yard games

5th & 6th grades: Ultimate frisbee, volleying, cooperative games, fitness testing, lacrosse, bowling, scooters, "striking" (rackets, bats, sticks), basketball, climbing (Trestle Tree), soccer, frisbee golf, yard games

Library/Media & Coding

Our library is a central hub to support literacy at MES. Children visit the media center on a weekly basis to learn the structure of the library, build research skills, identify quality websites, learn how to cite sources, and enjoy books being read aloud. Yearly participation in the Nutmeg Book Award Program has children reading and selecting their favorite book (out of a group of ten) as they excitedly await the announcement of winners.

Students develop the skills for locating and using information with both print digital tools and resources and how to use appropriate print and digital presentation platforms, independently and collaboratively, to share their learning with others.

Students learn to plan and employ effective research strategies to locate information and other resources for their intellectual or creative pursuits and build knowledge by actively exploring real-world issues and problems, developing ideas and theories and pursuing answers and solutions.

Through the Library/Media program, all students that, through the use of interactive robots (Dash and Dot), children leave develop a fundamental of:

- Logic of programming loops and waiting for events (K, 1st)
- Programming complex parameters, event handlers with multiple loops (2nd)
- Programming nested loops with event handlers and conditionals (3rd and 4th)
- Integrating repeat until loops, if/else logic and functions (5th and 6th)

Prekindergarten

Literacy

Our youngest learners are immersed in topics where they work to practice and acquire the overarching literacy skills of:

- Attending to and demonstrating understanding of stories.
- Asking questions and participating in discussions.
- Identifying and producing rhyme.
- Drawing/painting to represent ideas.

Children listen to and interact with a large variety of engaging texts, rhymes, and songs using story-telling techniques such as flannel boards and puppets. There is daily time to participate in fun, interactive play centers on a daily basis, building creativity and communication skills. As units change, the room changes and what would have in one week been a block center is now a paleontological dig site. Immersion in topics leads to fun, entertaining dialogue between children and between children and staff.

Numeracy

Our emerging mathematicians interact with numbers, colors, quantities, and distances seamlessly integrated into the topics being studied. As the year progresses, children move deeper into their exploration of numeracy, working with the following concepts:

- Relating numbers to quantities and quantities to numbers
- Sorting objects by a variety of attributes
- Learning the ordinal positions of first and last
- Building and completing patterns
- Learning the names of shapes
- Non-standard units of measurement

Interdisciplinary Topics

A sampling of topics used to integrate content and build foundational skills include:

- Hibernation/migration
- Dinosaurs
- Things that Grow
- Things that Go (Transportation)
- Farms

Prekindergarten Progress Reports/Report Cards showcase growth in the areas of literacy, numeracy, social development and fine motor skills. We report student progress relative to the following standards:
Literacy:

- Recognizes name in print
- Prints first name (some mirror images and mixed order are developmentally appropriate)
- Answers simple questions with picture cues
- Recognizes and names some letters, especially those in their name and/or those that have been taught
- Recognizes and produces rhyme

Numeracy:

- Counts objects 1-5
- Counts dots on cards or dice (1, 2, 3, etc)
- Matches quantity with numerical value for numbers 1-5
- Counts to 10
- Recognizes colors (red, yellow, blue, green, orange, purple, brown, black, pink, white, gray)
- Identifies basic shapes (square, triangle, circle, rectangle, rhombus, star, heart)
- Sorts by one category (shapes, numbers, color, size)
- Can recreate simple patterns - AB
- Can create simple patterns - AB
- Uses non-standard units of measurement

Kindergarten

Literacy

The Kindergarten program is guided by the Science of Reading to build the foundational literacy skills of all beginning readers as well as creating a habit for a love of reading. Daily explicit instruction in phonics and phonological awareness is coupled with immersion in engaging texts to build vocabulary, knowledge of text structures, and concepts of print. Decodable texts are strategically infused to reinforce knowledge of alphabetic code. High frequency words (also known as sight words) are introduced and practiced during *Fundations* and our small group instruction. Decodable HFW are introduced and practiced aligned to the related spelling pattern being taught through *Fundations* and Irregular HFW are taught by mapping words and learning the tricky part by heart.

Powerful reading experiences are coupled with daily opportunities to express thoughts in writing and speaking. Instruction in writing, from the formation of letters to the grammatical structures of sentences, provides our kindergarteners the experience of becoming authors. Oral language, from informal conversations with friends and structured dialogue with teachers, support content conversations by building vocabulary and conceptual understanding.

The structured literacy block includes a 30-minute *Fundations* lesson (phonics), a Heggerty lesson (phonemic awareness), an integrated writing block and a whole class instructional experience with shared text. Each day includes time to enjoy books independently, as well as read with friends. Read aloud time is a favorite in every classroom, sharing a wide variety of texts - some supporting content, some supporting the text structure being instructed, and some for the pure enjoyment of the text.

Report Card Information

Literacy standards evaluated throughout the year and included on the Report Card are:

Speaking and Listening

- Asks and answers questions to gather information, clarify or extend thinking
- Participates in group discussions
- Communicates thoughts clearly and logically
- Listens attentively to others
- Takes turns during conversations

Alphabetic Principle

- Recognizes and names upper and lower case letters
- Demonstrates letter/sound correspondence

Phonological Awareness

- Recognizes and produces rhyming words
- Blends sounds and syllables in words
- Segments sounds and syllables in words

- Isolates and pronounces initial and final sounds
- Recognizes the difference between a letter, a word, and a sentence

Phonics

- Acquires and applies grade level phonics skills

Reading

- Reads high frequency words
- Asks and answers questions about key details in a text (fiction & nonfiction)
- Listens and responds to text with understanding
- Demonstrates an application of decoding strategies in text

Writing

- Uses a combination of drawing, dictating and writing to compose a written piece
- Uses a combination of drawing, dictating and writing to demonstrate elaboration
- Demonstrates understanding of the basic convention of print
- Forms upper and lower case letters
- Spells simple words phonetically

Math

Building mathematical thinkers is the overarching goal of all mathematical instruction. Through usage of the *enVision 2020* Math program, coupled with in the moment mathematical supplemental activities, our kindergartners build a strong mathematical foundation.

Math topics instructed throughout the year:

- Numbers 0 to 10 (identification, counting, comparing)
- Addition/subtraction to 10
- Counting to 100
- Composing and decomposing numbers to 20
- Geometry (identify, describe, and group 2D and 3D shapes)
- Measurement (describe and compare measurable attributes)

Report Card Information

Math standards evaluated throughout the year* and included on the Report Card are:

Number Sense, Counting and Place Value

- Counts objects in a set using 1 to 1 correspondence
- Counts by 1's
- Counts by 10's
- Writes numerals from 0 to 20
- Compares number/sets of objects (more than, less than, equal to)
- Recognizes numerals from 0 to 20
- Demonstrates a beginning understanding of place value (tens and ones)

Operations

- Composes and decomposes numbers to 10 in more than one way
- Represents and solves addition and subtraction with objects
- Fluently adds and subtracts through 5

Measurement and Data Analysis

- Sorts and classifies objects using a variety of attributes

Geometry

- Identifies and describes geometric shapes (2D and 3D) using attributes
- Describes the relative positions of objects

(*Due to the scope and sequence of instruction, standards not yet instructed in a trimester will be noted with NA.)

Science

Our young scientists are innately curious about the world around them. Learners, through the support of Mystery Science on-line (mysteryscience.com), build knowledge and engage in explorations that deepen their curiosity and knowledge about the world.

Units	Overarching Questions
Earth's Systems: Sunlight & Warmth, Weather Patterns, Severe Weather	How can you get ready for a big storm? Have you ever watched a storm? How many different kinds of weather are there? How do you know what to wear for the weather? Why does it get cold in winter? How could you design a shelter to provide cooling?
Motion & Stability: Pushes and Pulls	How can you knock down a wall made of concrete? How can you knock down the most bowling pins?
Plant & Animal Needs	Where do animals live? How can you find animals in the woods? How do animals make their home in the forest? How do plants and trees grow?

Social Studies

The world is a fascinating place and its exploration starts in kindergarten as students start to build their knowledge of civics, economics, geography and history. Based on Connecticut Social Studies Framework, our kindergarten team infuses age appropriate exploration on topics centered around the concept of **Me and My Community**.

The disciplines outlined are the 'lenses' through which the students inquire about the content. The content is blended into instruction through literature, projects, and explorations.

Discipline	Content
Civics	Being a member of a classroom and a member of our school community
History	Me & My Family - holidays celebrated
Geography	Where We Live? Marlborough, CT
Economics	Basic needs (water, food, etc)

1st Grade

Literacy

Our first graders, during their structured literacy block, continue to build their understanding of spoken words, syllables, sounds, grade level phonics and word analysis skills through continued implementation of the *Fundations* and *Heggerty* programs. Experiences with decodable texts, strategically used in differentiated, and small group skills lessons, provide students with experiences that allow them to apply specific phonic patterns being instructed. Families will receive information on high frequency words that they could practice at home, after they have been instructed in school.

Engaging texts are used in lessons, where students experience a range of authors, craft, text structures and features, and vocabulary. In-depth discussions about text provides our 1st graders with opportunities to verbally share their thoughts and hear the ideas of others.

Expressing thoughts in writing, whether it is a personal reflection on a story or the creation of their first research project, our first graders build on their understanding of conveying thoughts through print. Explicit instruction is provided in different text structures, grade appropriate conventions of print, and strategies for organizing and elaborating on ideas.

Children continue to build their oral language skills throughout the entire day. From reflections shared during read-alouds, to analytical discussions held during science lessons, our 1st graders have numerous opportunities to build their conversational skills. Vocabulary building is strategically embedded, as depth of word knowledge provides the tools for our first graders to clearly express their thoughts and ideas.

Report Card Information

Literacy standards evaluated throughout the year and included on the Report Card are:

Phonological Awareness/Phonics

- Manipulates sounds in words
- Demonstrates understanding of spoken words, syllables and sounds (phonemes)
- Acquires and applies grade level phonics

Reading

- Reads high frequency words automatically
- Reads grade level material fluently and accurately to support comprehension
- Listens and responds to text with understanding
- Asks and answers questions to gather information, clarify and extend thinking
- Describes characters, setting and major events in a story
- Identifies and utilizes text features in both fiction and non-fiction
- Engages in group discussions to deepen understanding
- Identifies the main topic and retells key details in informational texts

Writing

- Uses conventional spelling of high frequency words
- Uses grade appropriate conventions in writing (capital letters and punctuation)
- Applies writing elements taught
- Focuses writing on one topic
- Uses elaboration in their writing
- Edits, revises and publishes a variety of writing
- Applies phonics skills in writing
- Prints legibly using good form, proportion and spacing

Math

Our 1st grade mathematicians build off of their kindergarten numeracy base, spending significant time composing and decomposing numbers, as well as developing an in-depth understanding of addition and subtraction. Mathematical problem solving is infused in lessons, providing children an opportunity to build their abstract reasoning, as well as persevere in problem solving.

We use the *enVision 2020* Math program, supplemented with enriching mathematical games and activities. Math topics instructed throughout the year include:

- Addition and subtraction through 20
- Working with addition and subtraction equations
- Place value
- Represent and interpret data
- Reason with shapes and their attributes

Report Card Information

Math standards evaluated throughout the year* and included on the Report Card are:

Number Sense/Place Value

- Counts on and identifies numbers through 120
- Writes numbers through 120
- Demonstrates understanding of place value (tens and ones)
- Compares and records two-digit numbers using greater, less and equals

Operations

- Knows addition and subtraction facts fluently through 10
- Demonstrates an understanding of addition and subtraction of two-digit numbers
- Represents and solves problems involving addition and subtraction

Measurement and Data Analysis

- Uses standard and non-standard units to estimate, compare and measure length
- Tells and writes time to the hour and 1/2 hour
- Represents and interprets data

Geometry

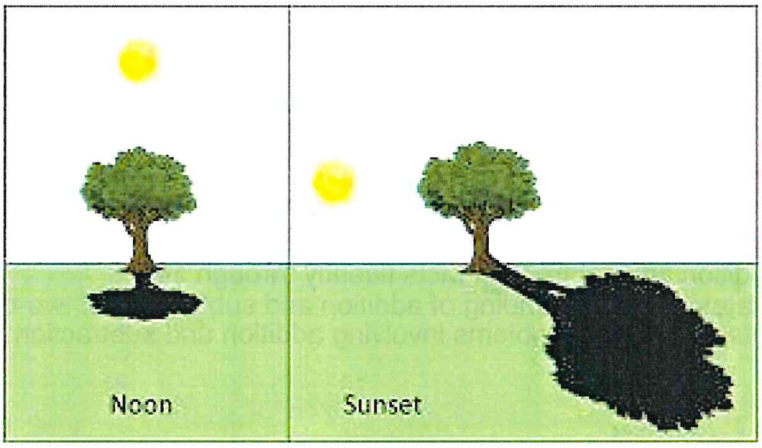
- Identifies defining attributes of 2D and 3D shapes
- Partitions circles and rectangles into equal shares and describes the shares using fraction vocabulary

(*Due to the scope and sequence of instruction, standards not yet instructed in a trimester will be noted with NA.)

Science

Our 1st grade scientists continue to explore the world around them. Our 1st graders, through the support of Mystery Science on-line (mysteryscience.com), engage in learning activities to continue to build their knowledge of the world around them.

Units	Overarching Questions
Sun, Moon & Stars (motion of the sun, shadows)	Could a statue's shadow move? What does your shadow do when you're not looking? Why do the stars come out at night?
Plant & Animal Structure & Survival	Why don't trees blow down in the wind? Why do birds have beaks? Why are polar bears white?
Light, Sound and Communication	Where do sounds come from? Can you see in the dark?



Social Studies

Our first graders continue learning about the world around them, as they build their knowledge of civics, economics, geography and history. Based on the Social Studies Framework, our students experience age appropriate topics centered around the concept of the **Community Beyond My Neighborhood.**

The disciplines outlined are the 'lenses' through which the students inquire about their content. The content is blended into instruction through literature, projects, and explorations.

Discipline	Content
Civics	Being a member of a community (classroom community, family, Marlborough)
History	Early US History (Plymouth Settlement)
Geography	Map of Marlborough, Connecticut, United States
Economics	Needs vs. Wants / Producers vs Consumers

2nd Grade

Literacy

Second graders continue their literacy journey, being immersed in daily learning experiences crafted to build the skills needed to read with accuracy and fluency to support comprehension of grade level texts. Targeted small group instruction continues to provide experiences with decodable texts, reinforcing phonetic concepts being taught during daily *Fundations* lessons. Families will receive information on high frequency words that they could practice at home, after they have been instructed in school.

Written expression expectations build, as our second graders interact and produce more complex writing pieces. Instruction helps students become more sophisticated in using meaningful word choice, effective organization, grade level punctuation, and varying sentence structure to effectively communicate.

Daily opportunities to verbally share thoughts and opinions is valued and encouraged throughout the day. From personal reflections upon texts to analytic discussions about science experiments, collaborative conversations are a vibrant part of the classroom experience.

Report Card Information

Literacy standards evaluated throughout the year and included on the Report Card are:

Reading

- Reads high frequency words automatically
- Identifies and utilizes text features in informational texts
- Shows understanding of text through written response
- Reads grade level text with accuracy and fluency to support comprehension
- Asks and answers questions to gather information, clarify or extend thinking
- Recounts stories and determines their central message, lesson or morale
- Ask and answers who, what, where, when, why and how questions to demonstrate understanding of key details in text
- Demonstrates inferential comprehension beyond the text
- Determines the meaning of unknown words and multiple meaning words and phrases

Writing

- Applies writing elements taught
- Generates ideas and gathers information for writing
- Uses organization in their writing
- Uses elaboration in their writing
- Clearly communicates ideas, opinions and knowledge
- Uses language conventions and grammar when writing and speaking

- Provides a sense of closure in their writing
- Prints legibly and neatly
- Uses conventional spelling of high frequency words
- Acquires and applies phonics skills

Math

Our 2nd graders continue to explore the mathematical elements of the world by spending time building their knowledge of place value (to thousands), as well as ending the year fluently adding and subtracting through 20. Through their work, students will identify values of variables (c + 2 = 5), as well as start constructing arrays that will build their understanding of the relationship between repeated addition and multiplication.

Report Card Information

Math standards evaluated throughout the year* and included on the Report Card are:

Place Value
- Demonstrates understanding of place value (ones, tens and hundreds)
- Compares whole numbers through 1,000 - using greater than, less than and equal to

Operations
- Computes math facts through 20
- Demonstrates an understanding of addition and subtraction of 2-digit numbers within 100
- Demonstrates an understanding of addition and subtraction of 3-digit numbers within 1,000
- Represents and solves word problems involving addition and subtraction
- Solves addition and subtraction problems with missing numbers
- Constructs arrays to gain a foundation for multiplication

Measurement and Data Analysis
- Uses standard units to estimate, compare and measure length
- Tells and writes time to the nearest 5 minutes
- Represents and interprets data
- Identifies coins and their values
- Counts various amounts of coins

Geometry
- Identifies common 2D shapes and their attributes
- Identifies a given fraction

(*Due to the scope and sequence of instruction, standards not instructed yet will be noted by N/A.)

Science

Our 2nd grade scientists continue to build their scientific knowledge, delving into new and exciting concepts about the world around them. Our 2nd grade team, through the support of Mystery Science on-line (mysteryscience.com), implements exciting units where our second graders continue to build their depth of knowledge and critical thinking skills on scientific topics outlined below.

Units	Overarching Questions
Matter	Can you really fry an egg on a hot sidewalk? Why are so many toys made out of plastic? Could you build a house out of paper?
Plant and Animal Habitats	Could a plant survive without light? Why do trees grow so tall? Should you water a cactus? Where do plants grow best? How many different kinds of animals are there? How could you get more birds to visit a bird feeder?
Earth's Systems	Why is there sand at the beach? What's strong enough to make a canyon? How can you stop a landslide?

Social Studies

Our second graders delve deeper into learning about the world around them, through learning explorations focused on building knowledge on the world. Based on the Connecticut Social Studies Framework, our second grade team infuses age appropriate exploration on topics centered around the concept of **Making a Difference.**

The disciplines outlined are the 'lenses' through which the students inquire about their content. The content is blended into instruction through literature, projects, and explorations.

Discipline	Content
Civics	Being a citizen of a town (how to help make a difference)
History	Research project - famous people (why did they make a difference)
Geography	Marlborough - and map features
Economics	What are the economic features of a town (businesses that help run a town)

3rd Grade

Literacy

Our 3rd graders continue to build on the solid literacy foundation instructed in the primary grades. Their daily *Fundations* work focuses on learning more advanced spelling rules, exploring how to unlock meaning of unknown words, as well as transition to cursive writing. Vocabulary acquisition is built through 'word of the day' instruction and deepened through academic and content specific words, meaningfully incorporated into all lessons.

Reading and writing blend seamlessly together as our 3rd graders complete units on elements of fairy tales and then craft their own fractured fairy tale, as well as craft their own animal research project after completing a unit on informational texts. Explicit instruction on text structure, organization, powerful word choice, grammar, and point of view are infused throughout the year.

Collaborative discussions provide children opportunities to ask and answer questions in a variety of settings. From informal conversations held during a read aloud to analytical discussions during science lessons, children have multiple opportunities to express their thinking.

Report Card Information

Literacy Standards evaluated throughout the year are:

Reading

- Reads grade level text with accuracy and fluency to support comprehension
- Describes characters in depth
- Knows and applies grade-level phonics and word analysis skills in decoding words
- Asks and answers questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers
- Uses strategies to determine the meaning of words and phrases as they are used in a text
- Distinguishes own point of view from that of an author, narrator or other characters
- Determines the main idea using key details from the text
- Uses evidence to support written responses to text questions

Written Language

- Applies writing elements instructed
- Produces writing in which the development and organization are appropriate for task and purpose
- Writes narratives to develop real or imagined experiences
- Writes informational texts to convey information clearly

- Writes opinion pieces, supporting a point of view with reasons
- Uses language conventions and grammar when speaking and writing
- Uses conventions of standard English: capitalization, punctuation and spelling

Math

Our 3rd grade mathematicians focus their year on exploring the concepts of multiplication and division of whole numbers, developing an understanding of fractions, relating area arrays and multiplication, as well as describing and analyzing two dimensional shapes. Through implementation of the *enVision 2020* Math program, as well as completion of a variety of 'mathematical think alouds' and math games, our third graders are solidly prepared for their fourth grade math journey.

Report Card Information

Math standards evaluated throughout the year* and included on the Report Card are:

Numbers and Operations with Base 10 and Fractions
- Uses place value understanding and properties of operations to perform multi-digit arithmetic
- Develops understanding of fractions as numbers

Operations and Algebraic Thinking
- Understands properties of multiplication and the relationship between multiplication and division
- Represents and solves problems involving multiplication and division
- Demonstrates fluency with multiplication and division facts
- Solves problems involving the four operations and identifies and explains patterns in arithmetic

Geometry, Measurement and Data Analysis
- Understands concepts of area and relates area to multiplication and to addition
- Recognizes perimeter as an attribute of plane figures and distinguishes between linear and area measurements
- Solves problems involving measurement and estimation of intervals of time, liquid volumes and masses of objects
- Represents and interprets data
- Reasons with shapes and their attributes

(*Due to the scope and sequence of instruction, standards not instructed yet will be noted by N/A.)

Science

Our 3rd graders deepen their knowledge of the scientific world through blended scientific experiences exploring the world through completion of experiments, hearing from expert

scientists as well as reading informational texts. Our 3rd grade team, through the support of Mystery Science on-line (mysteryscience.com), structures a year of exploration, knowledge building and critical thinking about the scientific phenomena.

Units	Overarching Questions
Plant Survival and Heredity	Why do plants grow flowers? Why do plants give us fruit? Why are some apples red? green?
Fossils, Animal Survival and Heredity	How do we know what dinosaurs looked like? Can you outrun a dinosaur? What kind of animals might there be in the future?
Weather and Climate	Where do clouds come from? How can we predict when it is going to storm? Where is the best place to build a snow fort? Why are some places always warm?
Forces, Motion and Magnets	What makes bridges so strong? How can you go faster down a slide? What can magnets do?

Social Studies

Based on the Connecticut Framework, our third grade team infuses age appropriate exploration on topics centered around the concept of **Connecticut - Past and Present.**

Discipline	Content
Civics	State Government
History	Native American History and Notable People from CT
Geography	Focus on Connecticut's landforms and bodies of water
Economics	Focus on the cities and towns of Connecticut (including industry)

4th Grade

Literacy

Immersion in a wide variety of fictional and informational texts provide the backbone of fourth grade. Fourth graders build their skills identifying what a text explicitly says, as well as learning how to draw meaningful conclusions. Through explorations in drama, prose, and poetry, students learn about first versus third person voice as well as explore the concept of theme.

Through content area studies, learners read and analyze informational texts/illustrations where they compare and contrast first and second hand accounts of events. Fourth graders also learn strategies for integrating information from multiple sources.

Writing, speaking, and listening standards are infused across every day. From experiences with formulating opinion pieces that address multiple perspectives on an issue, to formulating informational pieces about regions of the United States, our 4th graders have extensive, meaningful opportunities to express their thoughts verbally and in writing. Direct instruction is provided in grade level grammar and punctuation.

Report Card Information

Literacy Standards evaluated throughout the year are:

Reading

- Reads grade level text with accuracy and fluency to support comprehension in fiction and non-fiction texts
- Uses details from text when explaining what text explicitly states, as well as when drawing inferences
- Describes in-depth a character, setting or event drawing on specific details
- Compares and contrasts point of view from multiple texts
- Determines and clarifies the meaning of unknown and multi-meaning words and phrases in grade level text
- Interprets information visually, orally and quantitatively
- Paraphrases portions of a text presented in a variety of formats (orally, visually, quantitatively)

Written Language

- Writes opinion pieces using reasons and information to support point of view
- Writes informative texts that outline a topic and clearly convey information
- Writes narratives that clearly outline real or fictional events using effective structure and descriptive details
- Uses language conventions and grammar when speaking and writing
- Uses conventional spelling of high frequency words

Math

Our 4th graders focus their mathematical thinking on developing a solid understanding of multi-digit multiplication and division, deepening their understanding of fraction equivalence and calculating with fractions. They also build their geometrical analysis skills through categorizing and classifying shapes by attributes, such as angle measurements or elements of symmetry.

Report Card Information

Math standards evaluated throughout the year* and included on the Report Card are:

Numbers and Operations with Base 10 and Fractions

- Generalizes place value understanding for multi-digit whole numbers
- Uses place value understanding and property of operations to perform multi-digit arithmetic
- Builds understanding of fraction equivalence and ordering
- Builds fractions from unit fractions
- Understands decimal notation for fractions

Operations and Algebraic Thinking

- Uses the four operations with whole numbers to solve problems
- Understands factors and multiples
- Generates and analyzes patterns
- Demonstrates fluency with multiplication and division facts

Geometry, Measurement and Data Analysis

- Represents and interprets data
- Understands concepts of angle and angle measurements
- Draws and identifies lines and angles
- Classifies shapes by properties of lines and angles

(*Due to the scope and sequence of instruction, standards not instructed yet will be noted by N/A.)

Science

Our 4th graders interact with the scientific world by completing and discussing labs that deepen their critical thinking skills. Our 4th grade team, through the support of the Mosa Mack platform (mosamack.com) and supplemented by Mystery Science (mysteryscience.com), structures a year of exploration, knowledge building, and critical thinking about the scientific phenomena.

Units	Overarching Questions
Energy & Motion	What makes roller coasters go fast? Why is the first hill on a roller coaster the highest? Can you build a chain reaction machine?
Earth's Features & Processes	Can a volcano pop up where you live? Will a mountain last forever? What did your town look like a hundred million years ago?
Human Body (vision, hearing, and skeletal structure)	How far can a whisper travel? Why are some sounds high and some sounds low? How does your brain control your hand? How can some animals see in the dark?

Social Studies

Based on the Connecticut Social Studies Framework, our fourth grade team infuses age appropriate exploration on topics centered around the concept of United States geography as it relates to the regional cultural, economic, and political development of the United States.

Discipline	Content
Civics	Societal changes (immigration - Ellis Island)
History	Immigration and culture
Geography	How location affects life (jobs, housing)
Economics	Economic differences throughout the regions

5th Grade

Literacy

Our 5th graders embark on a year-long literacy adventure that immerses them in text. Each day showcases a different daily text (Classroom Book–Day), presented to the class for enjoyment and used as a launching pad to in depth analysis of multiple topics. From powerful discussions on theme and character development to an analysis of specific word choice, daily shared texts are a highlight of each day.

Along with the Classroom Book-a-Day, our 5th graders complete intricate novel studies, learn to unpack and understand varying forms of informational texts, and immerse themselves in a plethora of poetry and prose. Explicit instruction on reading strategies builds over the course of the year as students engage in more complex texts.

Writing to express memories, views, and perspectives is part of daily instruction. From grammar lessons to analysis of different text structures to impact messaging, 5th graders spend a lot of time writing. Student generated writing and published pieces are used to showcase impactful writing and launch lively discussions. Book a Day plays an integral role in this exploration of the written word.

Report Card Information

Literacy Standards evaluated throughout the year are:

Reading

- Reads grade level text fluently and accurately
- Reads and comprehends grade level texts
- Quotes accurately from a text when explaining what the text says explicitly and when drawing inferences from the text
- Summarizes and determines theme
- Compares/contrasts two or more characters, settings or events
- Analyzes multiple points of view of an event or topic
- Uses strategies to determine the meaning of unfamiliar words and phrases
- Integrates information from several texts to write or speak on a topic

Written Language

- Produces clear and coherent writing appropriate to task, purpose and audience
- Writes arguments to support claims with clear reasons and relevant evidence
- Writes effective narratives to develop real or imagined events/experiences
- Writes effective informative/explanatory texts
- Draws evidence from literary or informational texts to support analysis, reflection and research

- Strengthens writing by planning, revising, editing and rewriting
- Applies correct spelling of grade level words

Math

Fifth graders focus on integrating their prior understanding of addition, subtraction, multiplication and division into successful use of the standard algorithms for each, as well as applying knowledge to solve a variety of multi-step mathematical problems. As the year moves on, they move to a deeper understanding of fractions and decimals, building knowledge using a wide variety of manipulatives and graphics. Fifth graders end the year studying the concept of volume and learning about properties of two- and three-dimensional figures.

Report Card Information

Math standards evaluated throughout the year* and included on the Report Card are:

Numbers and Operations in Base 10
- Demonstrates understanding of the place value system
- Fluently multiplies whole numbers
- Divides multi-digit whole numbers
- Adds and subtracts decimals to the hundredths
- Multiplies and divides decimals to the hundredths

Numbers and Operations with Fractions
- Adds and subtracts fractions with like and unlike denominators
- Demonstrates understanding of multiplication of fractions
- Demonstrates understanding of division of unit fractions

Operations and Algebraic Expressions
- Writes and interprets numerical expressions
- Demonstrates fluency with multiplication and division facts

Measurement, Data and Geometry
- Understands and calculates volume
- Graphs points on a coordinate plane
- Classifies 2D shapes based on properties
- Represents and interprets data

(*Due to the scope and sequence of instruction, standards not instructed yet will be noted by N/A.)

Science

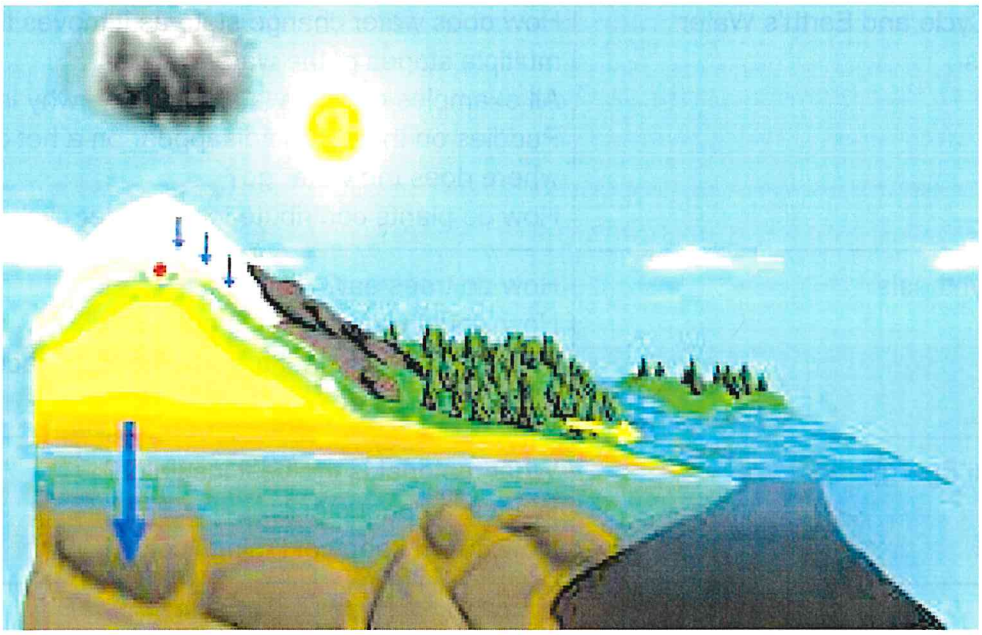
Our 5th graders, through the support of the Mosa Mack platform (mosamack.com), dive into scientific exploration through interaction with a variety of scientific mysteries. Each scientific exploration builds depth of content relevant vocabulary, specific background knowledge required to analyze problems, and a guided process to draw conclusions on information/data gathered.

Units	Overarching Questions
Scientific Method	Why is formulating a hypothesis so important? What data do we want to collect? What is the best way to display your data? What conclusions can you draw from your data?
Ecosystems & Food Webs	Where do fallen leaves go? Do worms really eat dirt? Who is a predator and who is considered its prey? What is the role of a decomposer? How does energy flow through an ecosystem?
Water Cycle and Earth's Water Systems	How does water change state as it moves through multiple stages of the water cycle? All examples of solid water are cold - why is that? Puddles on the ground disappear on a hot day - where does the water go? How do plants contribute to the water cycle?
Photosynthesis	How do trees eat? How would water travel to a tree? What would happen if a herbicide was placed near the base of a tree?
Thermal Energy	What material is the best insulator? What is a conductor? How do we keep cold things cold?

Social Studies

Based on the Connecticut Social Studies Framework, our fifth grade team infuses age appropriate exploration on topics centered around the concept of **US History (Explorers, Earliest Settlements, Colonial Times).**

Discipline	Content
Civics	Infused in all units (ie. working together to create / run early settlements)
History	Early Explorers, Early Settlements, and Colonial Times
Geography	Map skills infused within units on early explorers, early settlements
Economics	Infused in units (jobs in early settlements)



6th Grade

Literacy

Sixth graders apply their literacy knowledge to explore a wide range of texts - from prose to poetry to a variety of informational texts. Reading to explore concepts, unpacking author's messaging, and dissecting the impact of text structure are concepts throughout the year. Purposeful reading is infused through all content areas, providing opportunities to build academic and content specific vocabulary, as well as to learn the etymology of words.

Writing is meaningfully integrated into all subjects - with instruction focused on varying structure and word choice to build impact of pieces. Students collaborate with one another and their teachers, working to craft effective writing for specific purposes, including informative, argumentative, and explanatory texts. Sixth graders build their knowledge of grade level conventions, including accurate punctuation.

Throughout the year, during literacy block, our sixth graders will complete units on:

- Book Genres, Historical Fiction, Narrative Writing (Fall)
- Realistic Fiction, Literary Analysis (Winter)
- Nonfiction, Rhetorical Analysis, Poetry and Verse (Spring)

Report Card Information

Literacy Standards evaluated throughout the year are:

Reading

- Reads grade level text fluently and accurately
- Reads and comprehends grade level texts
- Cites textual evidence to support analysis of what the text says explicitly, as well as inferences drawn from the text
- Determines a theme or central idea of a text and identifies how it is conveyed
- Describes how plot unfolds, as well as how the characters respond as plot moves to resolution
- Explains how an author develops the point of view of the narrator or speaker in a text
- Compares and contrasts text in different forms or genres
- Determines the meaning of words and phrases as they are used in a text
- Traces and evaluates argument and specific claims in a text

Writing

- Writes arguments to support claims with clear reasons and relevant evidence
- Writes effective informative/explanatory texts
- Writes effective narratives to develop real or imagined events/experiences
- Produces clear and coherent writing, appropriate to task, purpose and audience

- Applies correct spelling of grade level words
- Strengthens writing by planning, revising, editing and rewriting
- Draws evidence from literary or informational texts to support analysis, reflection and research

Math

Sixth graders extend their understanding of mathematical operations through solving a variety of multi-step problems. As the year progresses, problems build to include one variable expressions and inequalities. The concepts of ratios and proportions are introduced and students learn how to use proportional reasoning to solve problems. Sixth graders end the year learning about surface area and how it relates to volume through solving a variety of real world problems, mostly involving packaging.

Report Card Information

Math standards evaluated throughout the year* and included on the Report Card are:

Number System
- Applies and extends previous understanding of operations with fractions to add, subtract, multiply and divide rational numbers
- Computes fluently with multi-digit numbers

Ratios and Proportional Relationships
- Analyzes proportional relationships and uses them to solve real world problems
- Uses ratio reasoning to solve problems

Expressions & Equations
- Demonstrates fluency with math facts
- Solves one variable equations and inequalities
- Writes, reads and evaluates expressions in which letters stand for numbers

Geometry
- Solves problems involving area, surface area and volume
- Calculates volume of prisms with fractional edge lengths

Statistics & Probability
- Develops understanding of statistical variability
- Displays numerical data in plots on a number line, including dot plots, histograms and box plots

(*Due to the scope and sequence of instruction, standards not instructed yet will be noted by N/A or shaded gray.)

Science

Our 6th graders explore scientific topics, drawing off their scientific knowledge gained over their elementary years and diving deeper into content. The NGSS standards are instructed through blended integration of the Mosa Mack platform (mosamack.com) and selected labs from content specific resources (Galapagos Island lab).

Units	Overarching Questions
Design Thinking and Scientific Method	How can you construct the tallest free-standing tower capable of supporting a given mass? How can you design a prototype to solve a problem - what do you need to know?
Oceans and Climate	How is an ocean current similar to a roller coaster? Why does cold water sink while warm water floats to the surface? How do land masses influence ocean currents?
Cells	What are cells made of and how do they work? What do cells look like? How are plant and animal cells the same? different?
Genetics vs. the Environment	Are traits influenced more by genetics or the environment? Is the type of fertilizer used on strawberry plants considered a genetic or environmental factor? Do you think height is influenced by genetic or environmental factors?
Climate Change & our Ecological Footprint	What is the difference between weather and climate? Can one degree of Celius difference have a significant impact on Earth? Do greenhouse gasses impact global temperatures?
Chemistry	What makes up an atom? What information does the Periodic Table of Elements give us? How do atoms join together to create molecules?

Social Studies

Based on the Connecticut Social Studies Framework, our sixth grade team infuses age appropriate exploration on topics centered around the concept of **World Regional Studies: South America, Western Europe, Eastern Europe and Middle America.**

Discipline	Content
Civics	Interactions with the world (trade, tourism)
History	Overview of major events from 1700-1950
Geography	Knowledge of different landforms, regional identifiers, 5 themes of geography
Economics	Wealth of nations