# Second Grade

# Curriculum Guide

# Melrose Public Schools

Dear Melrose Families:

The Melrose Public Schools offer a comprehensive curriculum in mathematics, English, science, social studies, health, physical education, art, digital literacy, and music. This curriculum guide is intended to provide information about the curriculum at your child's grade level.

This document outlines the essential questions and outcomes in each subject area and describes the course of study at each grade level. It is designed to provide an accessible resource for you at home to understand the curriculum for the coming year. The curriculum guide outlines efforts of the Melrose Public Schools in alignment of the curriculum in mathematics, literacy, science, and social studies to the Massachusetts' Curriculum Frameworks.

The Melrose Public Schools are dedicated to offering a diverse and rich learning experience for all our students in and outside the classroom. Our goal is to provide an engaging learning experience for students K-12.

We encourage you to contact your child's teacher or your school principal with any questions you may have regarding your child's classroom experience and curriculum. Please also refer to the Melrose Public Schools' website for more information on our schools and curriculum, www.melroseschools.com.

Sincerely,

Jennifer E. Turner, Ed.D., Assistant Superintendent for Teaching and Learning

Jess Patti, Principal Lincoln School

Milissa Churchill, Principal Horace Mann School

Mitzi Galante, Principal Hoover School

Vena Cruz, Principal Roosevelt School

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# Personalized Learning in Melrose Public Schools

In Melrose, we believe that personalized learning supports our vision of equitable and engaging education for all students. Personalized learning results from decisions about teaching and learning based on a framework of social-emotional learning, clear learning progressions and expectations for competency, and principles of universal design for learning.

These foundational concepts come to life through the student-centered approaches teachers choose and the flexibility of the learning environment that promote student agency and engagement. There are five main principles and best practices that are helping move from a teacher-driven to a learner-centered and eventually to a learner-driven environment.
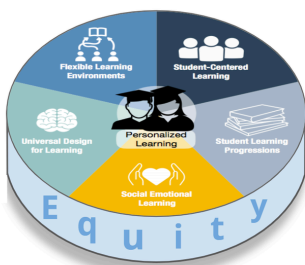
## Student-Centered Learning

Selecting and using instructional methods and assessment practices that give students choice and ownership for their learning builds agency and investment.

*Why is it important?: Children have different needs at different times and learn best when they are personally invested in their own learning. Given our students' unique needs and interests, our learning environment must be flexible enough to meet various needs. Self-directed learning is inherently personalized in terms of pace and approach and helps students discover their own learning identity including their strengths and interests, how they learn best, what practices help them work the most productively.*

## Student Learning Progressions

Defining clear outcomes and describing what progress and competency looks like fosters alignment, focus, and shared ownership of learning while promoting equitable outcomes.

*Why is it important?:  By making learning targets and progressions clear, students can outline their own learning path. The teacher supports student learning by providing learning paths to meet those goals.*

## Social-Emotional Learning

The skills and knowledge to manage emotions, set and work toward goals, establish and maintain relationships, and work productively with others serve as a foundation for success in life.

*Why is it important?: In order to learn, participants in the learning process (students, teachers, parents/guardians) need to be able to understand and manage emotions, and build positive relationships.  Social-Emotional Learning (SEL) is the process of teaching the skills required to achieve these goals.*

## Universal Design for Learning

A framework for optimizing teaching and learning to provide various means of engagement, representation and expression aligned with the science of how we learn.

*Why is it important? To meet the needs of diverse learners, we believe that the classroom environment must reduce barriers to learning for all students. Using UDL principles, the focus is on designing the learning environment and curriculum for the student*

## Flexible Learning Environments

Designing learning environments that are flexible and can accommodate the needs and interests of a range of learners leads to equitable outcomes.

*Why is it important? Students' variability is increasing meaning they need more pathway options in order to access the curriculum.  Students have a choice on how, when, and where, they learn in order to take ownership and agency of their learning.*

# Social and Emotional Learning

As described by the Center for Academic and Social Emotional Learning (CASEL), Social and Emotional Learning *is the process through which children and adults understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions.* This process is defined by five competencies including **Self-Awareness, Self-Management, Social Awareness, Relationship Skills,** and **Responsible Decision Making.**

Self-Awareness is one's ability to understand and be aware of their emotions, while Self-Management is one's ability to manage those emotions. Social Awareness describes our awareness of our impact on those around us, as well as an understanding that others have emotions to identify and manage. Relationship Skills are the ability to establish and maintain healthy and rewarding relationships with diverse individuals and groups. Responsible Decision Making is the ability to make thoughtful and effective choices about our personal decisions and to consciously and continuously evaluate the impact of our choices on both ourselves and others.

Through a combination of embedding SEL language, modeling strategies, and explicit skill teaching, students in grades K-2 are taught to identify what they are feeling and how to manage those emotions appropriately in school. Students learn that we all have emotions, but that those emotions change and do not define us. The accompanying text that is used for Social and Emotional Learning is Merrell's Strong Start, a research based program backed by CASEL, that has a mission to *help young children develop the social-emotional skills they need to build a strong foundation for school success*. The following 10 lessons are taught to all early childhood students:

**Lesson 1:** *The Feelings Exercise Group*
**Lesson 2 and 3:** *Understanding Your Feelings*
**Lesson 4:** *Understanding Other People's Feelings*
**Lesson 5:** *When You're Angry*
**Lesson 6:** *When You're Happy*
**Lesson 7:** *When You're Worried*
**Lesson 8:** *Being a Good Friend*
**Lesson 9:** *Solving People Problems*
**Lesson 10:** *Finishing Up*

In addition to Strong Start, another practice to highlight on our journey toward equitable social emotional learning is **restorative justice**. Melrose Public Schools has been striving to embed circles in our daily practice for several years and each year we deepen that practice a little more. Here is what you can expect:

- Daily community circles for grades PreK-5 that are centered around building and strengthening relationships and empathy for their peers.
- A consistent behavior flow chart used in all elementary schools that first identifies teacher managed and office managed behaviors, and then shares a scaffolded guide with restorative centered steps to take in response to occurring behaviors.
- Restorative conversations and circles are highly encouraged and supported for instances requiring them (ex. Student argument using hurtful language that others overhear).

# Diversity, Equity, and Inclusion

In Melrose, we believe in educational equity for all students and their families, and ***we know this is a lifelong process*** that we are always reflecting on and working towards. Educational equity means that all students receive what they need to develop to their full academic and social potential, regardless of their race, ethnicity, sexual orientation, gender, ability level, or socioeconomic status. We believe that educational equity can be achieved through **culturally relevant, responsive, and sustaining practices**:
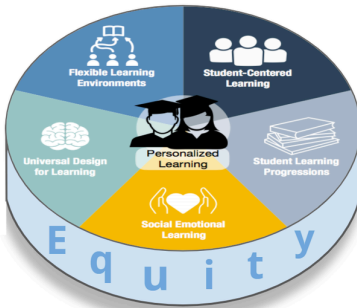


*"Culturally relevant, responsive, sustaining practices are grounded in teaching that creates a safe and brave learning environment that validates the social identities of students, their culture, values, beliefs, and the diversity of the community to ready our students to seek justice and take action on social justice issues. We intentionally seek racial and cultural equity and pluralism as manifested by our policies, curriculum, instruction, and teaching."* (MPS Diversity, Equity, and Inclusion Task Force, 2020)

Working toward educational equity in Melrose occurs through several different practices. One of these is to layer the **Learning for Justice Social Justice Standards** into all of our academic and social planning. These standards include 4 domains: *Identity, Diversity, Justice, and Action*.



- Identity standards aim to support students in developing **positive social identities** and **affirming who they are** as individuals.
- Diversity standards focus on helping students create an **appreciation for other cultures** and identities, while giving them the tools to thoughtfully and **respectfully discuss similarities and differences**.
- Justice standards seek to help students **identify the injustices** that they and others face while giving them the tools to **understand and tackle discrimination, microaggressions, and privilege**.
- The Action standards support students in taking **action on the injustices** that they identify and to deepen their understanding of **personal responsibility**.

**Social Justice Standard Example** (there are 4 more standards in each category)**:**

| Identity | Diversity | Justice | Action |
|---|---|---|---|
| Students will recognize traits of the dominant culture, their home culture and other cultures and understand how they negotiate their own identity in multiple spaces. | Students will develop language and knowledge to accurately and respectfully describe how people (including themselves) are both similar to and different from each other and others in their identity groups. | Students will recognize that power and privilege influence relationships on interpersonal, intergroup and institutional levels and consider how they have been affected by those dynamics. | Students will express empathy when people are excluded or mistreated because of their identities and concern when they themselves experience bias. |

# English Language Arts

The English Language Arts program consists of a daily literacy block and a writer's workshop. The literacy block consists of both whole group and small group instruction. Whole group instruction focuses on core lessons in comprehension and vocabulary. The teacher then meets with students in small groups that target students' individual needs. While the teacher meets with small groups, students work independently and collaboratively on reading and writing tasks that relate to reading skills and strategies. Students might read a text with a partner or write in response to a text they have read.

The core text employed by students is Savvas's *My View* program, which is a comprehensive English Language Arts (ELA) Program.   The texts are accessible to students and parents online. Some key components of *My View* include:

- Student knowledge is built around engaging topics with content-specific vocabulary, building science and social studies content knowledge as students learn.
- The program nurtures the love of reading through the use of award-winning, authentic literature from many different genres, including biographies, poems, folktales, and technical writing.
- The literature features an appropriate balance of 50% fiction and 50% nonfiction in the primary grades.  As students become more familiar with informational text, that ratio shifts to 40% fiction and 60% nonfiction.
- Students will be guided through complex texts by using close reading routines in an on-level text, called Sleuth that encourages students to read like detectives.
- The program also helps to build foundations reading skills from listening to blending to decoding, and then using letter sounds to spell words.  This solid base allows students to attack more complex texts and reading tasks.

In ELA, students build confidence and learn to read and write in new and challenging ways.  Students learn to write in various forms in response to text and other sources.  Students also write narratives, informational and explanatory text, along with completing written research.

## Close Reading

Some texts can be understood after one reading. Other more complex texts will require us to read them several times.  During the second reading, students look closely at what the author says and how they say it. When students reread texts several times, they are using the skills associated with close reading. When reading a literary text, students will analyze the characters, setting, theme, and tone. They will note how the author uses language to create a mood or develop the theme of the text. As students read, they also look for specific evidence from the text that supports the conclusions they draw. Teachers facilitate the process of close reading by asking text based questions.

## Response to Text

There are three types of responses to text: A literature task, a narrative task, and a research simulation task. Students may be asked to construct a response to a set of texts in one of these ways; between two pieces of literature (a literature task), as a narrative response citing examples from a text (a narrative task), or using non-fiction articles/videos etc. to write and essay using information from multiple texts (a research simulation task).

## Project-Based Inquiry

Students have opportunities to solve real-world problems through asking questions, collaboration, research, and the development of creative products.

The following is a list of the units of study, which provide a synopsis of concepts to be explored this year.

### Units of Study

| Units and Essential Questions | Foundational Reading Skills Outcomes | Comprehension Outcomes |
|---|---|---|
| **Unit 1**: You Are Here<br><br>**Genre**: Realistic Fiction, Informational Text, Poetry<br><br>**EQ**: How do different places affect us? | ● Read and write words with short vowels<br>● Read and write words with long vowels CVCe pattern<br>● Read and write words with consonant digraphs ch,th,sh,wh,ph,tch<br>● Read and write words with inflected endings:-s,-es,-ed,-ing<br>● Read and write words with r controlled vowels:ar,or,ore,oar<br>● Phonological awareness skills<br>   ○ Rhyming<br>   ○ Add & remove sounds<br>● High Frequency Words: which,each,than,called,long,most,more,things,sound,great,before,means,follow,form,show,also,large,small | ● Describe and understand characters & setting.<br>● Identify the main idea<br>● Explain patterns & structures<br>● Describe & understand plot elements<br>● Use text evidence<br>● Summarize<br>● Monitor comprehension<br>● Make & confirm predictions |
| **Unit 2**: Nature's Wonders<br><br>**Genre:** Informational Text, Realistic Fiction, Fiction<br><br>**EQ**: What patterns do we see in nature? | ● Read and write words with contractions<br>● Read and write words with long a patterns: ai,ay,ea<br>● Read and write words with vowel digraph ie<br>● Read and write words with long e pattern:ee,ea,ey,y<br>● Read and write words with long o pattern"o,oa,ow<br>● Read and write compound words<br>● Phonological awareness skills:recognize changes in words,change sounds in base words | ● Identify text structures<br>● Use text features<br>● Understand plot & setting<br>● Describe & understand characters<br>● Ask & answer questions<br>● Make & confirm predictions<br>● Visualize details<br>● Make inferences<br>● Determine key ideas |

| | | |
|---|---|---|
| | ● High Frequency Words: different,between even, ind,change,air,animal,point,study,letter,answer,page,near,food,try,country,city,school | |
| **Unit 3**: Our Traditions<br><br>**Genre**: Fables,Traditional Tales,Informational Text,Realistic Fiction,Procedural Text<br><br>**EQ:** What makes a tradition? | ● Read and write words with long i pattern:i,ie,i_e,y<br>● Read and write words with r controlled vowels:er,ir,ur<br>● Read and write words with diphthongs:ou,ow,oi,oy<br>● Read and write words with vowel digraphs:oo,ue,ew,ui<br>● Read and write words with complex consonants:c/s/,g/j/<br>   ●    dge/j/<br>● High Frequency Words: Eyes,earth,thought,along,few,head,something,example,paper,often,important.took,hear,idea,enough,group,book,almost | ● Identify theme<br>● Discuss author's purpose<br>● Compare & contrast stories<br>● Understand text features<br>● Determine key ideas<br>● Make connections<br>● Visualize details<br>● Make connections<br>● Make inferences |
| **Unit 4**: Making a Difference<br><br>**Genre**: Biography,Realistic Fiction, Persuasive Text<br><br>**EQ:** Why is it important to connect with other people? | ● Read and write closed & open multi syllable words:VC/V, V/CV<br>● Read and write words with suffixes:-ly,-ful,-er,-less,-or<br>● Read and write words with syllable pattern VCCv<br>● Read and write words with consonant patterns:kn,gn,mb,lf<br>● High Frequency Words: sometimes,mountain,young,being,talk,song,above,family,music,color,questions,area,horse,problem,complete,since,usually,friends | ● Identify text structures<br>● Use text structure<br>● Determine theme<br>● Identify text structure:chronological<br>● Understand persuasive text<br>● Ask & answer questions<br>● Make connections<br>● Create new understanding<br>● Make & confirm predictions<br>● Monitor comprehension |
| **Unit 5**: Our Incredible Earth<br><br>**Genre**: Informational Text,Daram,Poetry<br><br>**EQ**: How does earth change? | ● Read and write words with double consonants<br>● Read and write words with vowel patterns:aw,au,augh,al<br>● Read and write words with syllable pattern: VCCV<br>● Read and write words with prefixes:un,re,pre,dis<br>● Read and write homograph words | ● Describe connections<br>● Compare & contrast texts<br>● Identify elements of drama<br>● Explain patterns & structures<br>● Identify main idea<br>● Monitor comprehension<br>● Create new understandings<br>● Confirm & adjust predictions<br>● Make connections<br>● Make inferences<br>● |

| | ● High Frequency Words:heard,door,sure,across, during,hours,products, happened,color,questions,area, horse,problem,complete, toward,against,numeral | |
|---|---|---|

## Writer's Workshop

In grades K-5, students write every day during a period called "writer's workshop." In a writer's workshop, the teacher begins with a short lesson where they model an element of good writing. This is called the "mini-lesson"; "mini" because it focuses on just one teaching point. Students then move to writing independently. The teacher circulates from student to student providing feedback to help students improve their writing. It is through this individual or group conferencing with students that teachers can meet the varied needs of writers in their classroom.

The focus of the lessons shift each week with the MyView curriculum. First, students will be introduced and immersed in the genre. They spend some time learning the elements of the genre, developing structure of their writing, as well as the writer's craft. Then, they publish and celebrate their work. The teacher asks students to share their writing with partners or asks a few students to share their writing with the class. The sharing at the end of the writing time helps students develop a sense of audience. Students begin to understand that the purpose of writing is for others to hear their ideas and thoughts. Students are also given an opportunity to talk about their writing..

### Different Types of Writing

Students write in different genres or types of writing throughout the school year including, personal narratives, informational, research, and persuasive writing.  Students focus on the following four genres of writing:
- Narrative writing tells a personal or fictional experience.
- Expository or informational writing informs, instructs, explains, defines, or clarifies. Students may also research a topic to learn more about what they are writing.
- Persuasive writing persuades readers about an opinion or belief.
- Poetry writing creatively tells stories and describes objects or ideas.

Students in grades K-5 also write in response to what they have read.  By writing about their ideas and what they have read, teachers are helping students develop their thinking and reading comprehension. Students might write a narrative, informational article or persuasive letter about a text that they have read.

## Units of Study

The following is a list of the units of study, which provide a summary of outcomes for each unit.

| Units | Outcomes |
|---|---|
| **Launching Writer's Workshop** | ● Become familiar with a variety of genres<br>● Learn how to plan and revise writing<br>● Recognize the structure of fiction and non-fiction<br>● Write, revise, and publish work in a variety of genres |
| **Informational Text:** List Article | ● Explore and analyze informational text to see how authors write in this genre.<br>● Develop a writing plan for a list article.<br>● Use details that support a main idea.<br>● Incorporate text features to enhance meaning.<br>● Write an informational list article. |
| **Poetry**: Poem | ● Explore and analyze poems to see how authors write in this genre.<br>● Learn characteristics of poetry and generate ideas.<br>● Explore sensory details and choose words for effect.<br>● Apply language conventions correctly.<br>● Write poetry. |
| **Narrative:** Personal Narrative | ● Explore and analyze personal narratives to see how authors write in this genre.<br>● Develop setting, problem, and resolution in narratives.<br>● Focus on sequence and craft a conclusion.<br>● Write a personal narrative. |
| **Informational Text:** How-To Article | ● Explore and analyze How-To Book to see how authors write in this genre.<br>● Recognize the characteristics of procedural texts.<br>● Develop easy-to-follow instructions using commands. |

| | ● Include a graphic, a list of materials, and sequential steps.<br>● Write how-to books. |
|---|---|
| **BONUS Opinion Writing:**<br>Book Review | ● Explore and analyze opinion writing in book reviews to see how authors write in this genre.<br>● Introduce a topic, state an opinion, and supply supporting reasons.<br>● Capitalize book titles<br>● Write book reviews. |

# Mathematics

The core text in mathematics is Savvas EnVision Math. The research-based program and its resources fully support and align with the Massachusetts Mathematics Curriculum Frameworks. EnVision Math is a math program that balances skill instruction with instruction that develops conceptual understanding through problem-based interactive and visual learning. The text is also available online and may be accessed by students at home.

The curriculum has 3 key focal points:
- Conceptual Development- Interactive Learning + Visual Learning
- Ongoing Assessment, Diagnosis, and Intervention
- Differentiated Instruction

Topics are organized around math strands focusing on the Big Ideas and Essential Understandings of Math. The Big Ideas are the conceptual underpinnings of the program and the glue that provides conceptual cohesion across lessons, topics, grades, and standards. Big Ideas connect Essential Understandings, which occur within and across lessons.

The Massachusetts Math Curriculum Frameworks are divided into content and practice standards. The content standards outline the math concepts students should know by the end of the year. The practice standards are the mathematical habits of mind that students will develop as they go through the grades.

### Standards for Mathematical Practices
Students at all grades are expected to develop proficiency with these practice standards along with an understanding of the content standards. These are the habits of mind that all successful mathematical thinkers use to solve problems. Students will gain experience with these practices through class discussions, collaboration with peers to solve problems, and tasks that provoke different levels of student thinking. These practices are not meant to be a checklist of skills to be learned individually. Students will use multiple practices when solving a single problem.
- Make sense of problems and persevere in solving them.
- Reason abstractly and quantitatively.
- Construct viable arguments and critique the reasoning of others.
- Model with mathematics.
- Use appropriate tools strategically
- Attend to precision.
- Look for and make use of structure.
- Look for and express regularity in repeated reasoning.

## Math Workshop
Students participate in a daily math block. The math workshop is structured so students have opportunities to talk, write and solve problems. Math is structured to provide students whole and small group instruction. In whole group instruction, students participate in problem solving and discussion of the math topic as a whole class. Students then move to work independently, with partners, and in small groups to apply the mathematical concepts. As students work, the teacher provides small group instruction based upon students' needs.

## Writing in Math
During math, students write in math journals. Students solve problems or write about the concepts they are learning. Journals provide students with an opportunity to use multiple standards for mathematical practices. Students construct viable arguments and critique the reasoning of others in writing and also model with mathematics. All of the mathematical practices might be evidenced in a math journal dependent on the problem.

The acronym of DICE provides students a strategy to solve problems and tasks in math. Students approach a problem by first dissecting, which asks them to make sense of the problem. Students then illustrate the problems focused on seeing the relationships between the numbers. The problem is then represented in numbers through calculations. Students explain their thinking in words and/or orally.

Students engage in multiple opportunities to solve problems in math. In a problem based lesson, the teacher leads the class in understanding the problem and explains expectations for solving a problem. While students work on the problem, the teacher provides hints but no solutions. The teacher asks questions to facilitate student's thinking. Teachers observe and assess as students work. In the end, teachers conduct a discussion where students justify and explain strategies for solving the problem. Teachers will accept student solutions without evaluation in order to help all of the students develop their own understanding of the problem.

## Talk Moves
Students are encouraged to talk in math class to show their understanding of concepts.  Teachers facilitate this "math talk" by using talk moves. Talk moves are strategies that teachers implement to increase academic talk in the classroom.  Talk reveals understanding and misunderstanding, while supporting academic language development.  Talk also supports deeper reasoning and social development in students.  Talk moves create a classroom where respect and equal access to participation are valued norms.

By talking, children gain greater understanding and ownership of mathematical concepts as they develop and express their own ideas.  Describing one's methods to others can clarify one's own thinking.  Similarly, hearing and analyzing others' approaches can supply one with new perspectives; and frequent exposure to different approaches engenders flexible thinking. Talking provides opportunities for children to understand errors they have made and permits teachers to assess children' understanding on an ongoing basis.

Number talks are short 5-10 minute discussions, where the focus is on mental math and describing one's thinking to others. A problem or series of problems is presented to the students, and they are asked to solve them using mental math. Hand signals can be used by the teacher to help engage all students. Three to four student strategies share with the whole class their strategies for solving the problem.

## Units of Study

The following is a list of topics which provide a quick synopsis of concepts to be explored this year.   As you begin to see your student's work as it arrives home and as it is shared when you visit the classroom, you will have a better understanding of the depth and quality of the concepts your child will be learning.

| Topics | Essential Questions | Outcomes |
|---|---|---|
| **Operations and Algebraic Thinking**<br>● Understanding Addition and Subtraction<br>● Addition Strategies<br>● Subtraction Strategies<br>● Working with Equal Groups | ● What are some ways to think about addition and subtraction?<br>● In what ways can operations affect numbers?<br>● How can different strategies be helpful when solving a problem?<br>● What are strategies for finding addition and subtraction facts?<br>● How can different strategies be helpful in learning the basic facts?<br>● What is the relationship between an array and repeated addition? | ● Solve problems by writing subtraction and addition number sentences for a variety of problem solving situations.<br>● Write related addition and subtraction facts.<br>● Solve problems to solve addition and subtraction problems using counters to model.<br>● Solve fluently and automatically addition facts.<br>● Solve a story problem by drawing pictures and writing a number sentence.<br>● Compute differences by applying related addition facts to 10.<br>● Compute differences by applying related addition facts to 18.<br>● Solve two-question problems by using the answer to the first question to answer the second question.<br>● Model repeated addition by building arrays to write number sentences.<br>● Solve problems using repeated addition. |
| **Numbers and Operations in Base Ten**<br>● Place Value to 100<br>● Mental Addition<br>● Mental Subtraction | ● How can numbers to 100 be shown and compared?<br>● How does a digit's position affect its value?<br>● In what ways can operations affect numbers?<br>● How can different strategies be helpful when solving a problem?<br>● How can sums and differences be found mentally?<br>● What is a standard procedure for adding and subtracting two-digit numbers?<br>● What number patterns can be helpful in reading and writing numbers to 1,000? | ● Demonstrate two-digit numbers by grouping objects into tens and ones.<br>● Read and write number words for numbers 0-99.<br>● Compare two-digit numbers using symbols.<br>● Identify and write numbers that are one before and one after given numbers.<br>● Count on and count back to identify missing numbers to 100.<br>● Identify and write numbers that are 10 more and 10 less than given numbers.<br>● Learn to identify even and odd numbers.<br>● Solve problems by using data from a chart.<br>● Mentally add a two-digit number and a one-digit number.<br>● Add using multiples of 10.<br>● Solve problems using number patterns.<br>● Subtract multiples of 10 from two-digit numbers using mental math.<br>● Compute the difference between two-digit numbers less than 100.<br>● Add a one-digit number to a two-digit number using models with and without regrouping.<br>● Model two-digit addition using number lines.<br>● Add 3 and 4 two-digit numbers using paper and pencil.<br>● Subtract a one-digit number by a two-digit and two-digit numbers with and without regrouping using the standard algorithm. |

| Topics | Essential Questions | Outcomes |
|---|---|---|
| **Numbers and Operations in Base Ten (continued)**<br>● Place Value to 1,000<br>● Adding Two-Digit Numbers<br>● Subtracting Two-Digit Numbers<br>● Three Digit Addition and Subtraction | ● What are the ways to add and subtract three-digit numbers?<br>● How does a digit's position affect its value?<br>● What number patterns can be helpful in reading and writing numbers to 1,000? | ● Count by hundreds to 1,000.<br>● Show numbers up to 1,000 using place-value models.<br>● Identify and record three-digit numbers in expanded or standard form, and number word form.<br>● Add and subtract multiples of 10 or 100 to and from a three digit number without regrouping.<br>● Find, identify, and apply number patterns to numbers of a hundred chart.<br>● Skip count by different amounts on the number line and use the patterns to identify the numbers that come next.<br>● Compare three-digit numbers using the symbols <, =, >.<br>● Order 3 three-digit numbers from least to greatest and greatest to least.<br>● Solve problems by finding number patterns.<br>● Explore different strategies for adding three-digit numbers.<br>● Add three-digit numbers mentally without regrouping.<br>● Model with place value blocks to add 2 three-digit numbers with regrouping.<br>● Add 2 three-digit numbers with regrouping using paper and pencil.<br>● Apply different strategies to subtract three-digit numbers.<br>● Find the missing part by counting one or counting back, when given a quantity and one of its parts.<br>● Use models to subtract three-digit numbers with regrouping.<br>● Subtract three-digit numbers using a standard algorithm.<br>● Apply logical reasoning to solve problems. |

| Topics | Essential Questions | Outcomes |
|---|---|---|
| **Measurement and Data**<br>● Counting Money<br>● Money<br>● Measuring Length<br>● Tine, Graph, Data | ● What strategies can be used to count money?<br>● Why does "what" we measure influence "how" we measure?<br>● Why display data in different ways?<br>● How can sums and differences be estimated?<br>● What is the process for measuring length?<br>● Why does "what" we measure influence "how" we measure?<br>● Why display data in different ways?<br>● How can clocks, bar graphs, and pictographs be used to | ● Identify the value of a group of half-dollars, quarters, dimes, nickels, and pennies.<br>● Count collections of coins that include half-dollars, quarters, dimes, nickels, and pennies.<br>● Show the same amount of money using different sets of coins.<br>● Count money amounts greater than one dollar and write the amount with a dollar sign and a decimal point.<br>● Make an organized list to find different combinations of coins.<br>● Complete and record addition and subtraction problems using two-digit coin amounts.<br>● Solve problems involving adding and subtracting money by using the try, check, and revise strategy. |

| | | |
|---|---|---|
| | show data and answer questions? | ● Estimate and measure items using inches, feet, and yard. <br> ● Estimate and measure the lengths and heights of objects in centimeters and meters. <br> ● Solve measurement problems using addition and subtraction. <br> ● Measure to compare length and express the length difference in a standard length unit. <br> ● Associate numerals on an analog face with increments of five minutes. <br> ● Read and express time in terms of quarter and half past the hour and before the hour. <br> ● Represent a set of data in a tally chart and in a bar graph. <br> ● Measure objects and graph the results using rulers to measure. <br> ● Solve problems using picture graphs and bar graphs. |
| **Geometry** <br> ● Geometry | ● How can shapes and solids be described, compared, and used to make other shapes? <br> ● How does geometry better describe objects? <br> ● How do we categorize shapes? | ● Identify solid figures by their faces or flat surface, edges, and vertices. <br> ● Identify the place shapes that form the flat surfaces of solid figures. <br> ● Identify and draw polygons (triangles, quadrilaterals, pentagons, and hexagons) and list their attributes. <br> ● Recognize and name trapezoids, parallelograms, and hexagons, put shapes together to make new shapes, and identify the number of sides and vertices in each shape. <br> ● Cut shapes apart to make new shapes. <br> ● Divide rectangles into equal squares and count how many squares are needed to completely partition the rectangle. <br> ● Determine whether a shape has been divided into equal or unequal parts. If the parts are equal, count the number of parts. <br> ● Solve riddles about plane figures and solid figures using clues. |
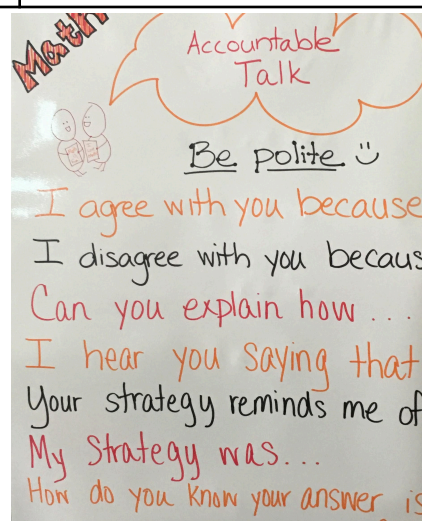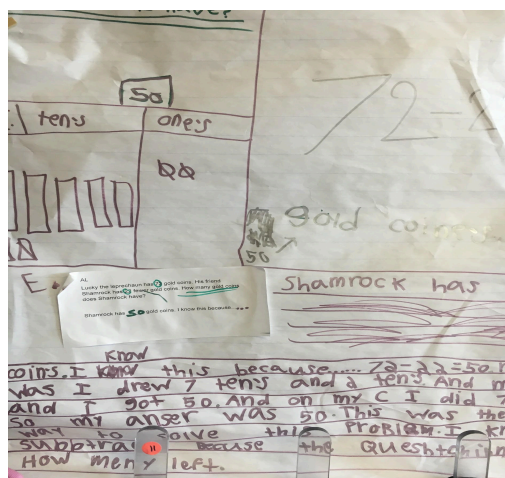
# Assessments

All content areas and teachers use assessments to measure students' progress towards the standards and outcomes. Assessments provide teachers data on students' individual programs to inform their daily instruction. The assessments described below are common assessments administered in all grades and classrooms across the districts in ELA and mathematics.

## District-Wide Benchmark Assessments for Grades K-5:

The following assessments are administered to students district-wide three times a year (Fall, WInter, and Spring).

| English Language Arts | Purpose |
|---|---|
| Dibels 8 | Measure literacy skills of beginning phonics, fluency, and comprehension. |

| Math | Purpose |
|---|---|
| I-Ready Math | Measure student progress towards state standards.<br><br>Assess students' mathematical understanding and thinking as they solve a problem. |

| SEL | Purpose |
|---|---|
| SEL Screener | To assess how students think about how they learn (metacognition), how they feel while they are at school, and how they act while they are in class with their peers. |

## DIBELS 8

Students in grades K-5 are assessed using **DIBELS** 8, **D**ynamic Indicators of **B**asic **E**arly **L**iteracy **S**kills. DIBELS tests five skills that are necessary for learning to read. Children who learn these skills become good readers. The skills are:
   ★ Phonemic Awareness: Hear and use sounds in spoken words
   ★ Alphabetic Principle: Know the sounds of the letters and sounding out written words
   ★ Accurate and Fluent Reading: Read stories and other materials easily and quickly with few mistakes
   ★ Vocabulary: Understand and use a variety of words.
   ★ Comprehension: Understand what is spoken or read.

DIBELS is made up of seven short individual tests, called subtests. Each DIBELS subtest focuses on a different skill and takes about 1 minute to do. Your child may be given two to five of the DIBELS subtests depending on his or her grade level.

## I-Ready Diagnostic Assessment - Math

The i-Ready Diagnostic is an adaptive assessment that adjusts its questions to suit student needs. Each item a student sees is individualized based on their answer to the previous question. For example, a series of correct answers will result in slightly harder questions, while a series of incorrect answers will yield slightly easier questions. The purpose of this is not to give students a score or grade, but instead to determine how best to support a student's learning.

# Science

As students grow in their ability to speak, read, write and reason mathematically, they also grow in their ability to understand larger systems and the parts that make them up.  Students start to look beyond the structures of individual plants and animals to look at the environment in which the plants and animals live as a provider of the food, water, and shelter that the organisms need.  They learn that water is found everywhere on Earth and takes different forms and shapes.  Students map landforms and bodies of water and observe that flowing water and wind shapes these landforms.  Students use their observation skills gained in earlier grades to classify materials based on similar properties and functions.  They gain experience testing different materials to collect and then analyze data for the purpose of determining which materials are the best for a specific function.  They construct large objects from smaller pieces and, conversely, learn that when materials are cut into the smallest possible pieces, they still exist as the same material that has weight.  These investigations of how parts related to the whole provide a key basis for understanding systems in later grades.

## Science and Engineering Practices

The science and engineering practices include the skills necessary to engage in scientific inquiry and engineering design and include:
- Ask questions (for science) and define problems (for engineering).
- Develop and use models.
- Plan and carry out investigations.
- Analyze and interpret data.
- Use mathematics and computational thinking.
- Construct explanations (for science) and design solutions (for engineering).
- Engage in argument from evidence.
- Obtain, evaluate, and communicate information.

## Science Notebooks

The practice of using science notebooks engages students in thinking about real-world situations and scientific ideas introduced in lessons and activities. The notebook is means for students to think scientifically – content, skills and thinking. Students learn expository writing structures and communicate scientific thinking and understanding. Teachers can use the information in the notebook as a form of assessment.

## Science Inquiry

Scientific inquiry reflects how scientists come to understand the natural world, and it is at the heart of how students learn. Students learn how to ask questions and use evidence to answer them. In the process of learning the strategies of scientific inquiry, students learn to conduct an investigation and collect evidence from a variety of sources, develop an explanation from the data, and communicate and defend their conclusions.

In science, students also engage in discussion about their learning. Student talk reveals understanding and misunderstanding in science. Student talk supports academic language development and supports deeper reasoning. Student talk supports social development and perspective taking. Student talk reveals understanding and misunderstanding in science. Student talk supports academic language development and supports deeper reasoning. Student talk supports social development and perspective taking. Students provide observations, predictions, questions, explanations from the data, and communicate and defend their conclusions.

Talk moves in science are used by the teacher and students to help create student centered discussions. The moves include revoicing, say more, repeat, press for reasoning, agree/disagree, wait time, and partner talk.

| Units | Module Anchor Phenomenon & Driving Question | Outcomes |
|---|---|---|
| **Physical Science**: Solids & Liquids | **Anchor Phenomenon:** Matter in two phase—solid and liquid<br><br>**Module driving question**: How are solid and liquid materials similar and different?<br><br>How do the properties of solid and liquid materials relate to how they can be used and how they can change? | ● Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.<br>● Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.<br>● Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object.<br>● Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.<br>● Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.<br>● Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.<br>● Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs. |
| **Earth Science**: Pebbles, Sand, & Silt | **Anchor Phenomenon:** Earth materials cover the surface of our planet<br><br>**Module driving question**: What are the properties of earth materials?<br><br>How do earth materials interact and change? | ● Make observations from media to construct an evidence-based account that Earth events can occur quickly or slowly.<br>● Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.<br>● Develop a model to represent the shapes and kinds of land and bodies of water in an area.<br>● Obtain information to identify where water is found on Earth and that it can be solid or liquid.<br>● Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.<br>● Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. |

| | | <ul><li>Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</li><li>Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</li><li>Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each perform</li></ul> |
|---|---|---|
| **Life Science**: Insects & Plants | **Anchor Phenomenon:** Natural history of common insects and their interactions with plants<br><br>**Module driving question**: What is the natural history of some plants and animals in different habitats? | <ul><li>Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</li><li>Plan and conduct an investigation to determine if plants need sunlight and water to grow.</li><li>Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</li><li>Make observations of plants and animals to compare the diversity of life in different habitats.</li><li>Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.</li><li>Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.</li><li>Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</li></ul> |

## Social Studies - Global Geography: Places and Peoples, Cultures and Resources

Students learn about global geography, looking at reasons why people settle in particular places, why they migrate, how they bring culture with them, and how they earn a living, exchange goods and services, and save for the future.

In order to promote critical thinking and inquiry in our elementary classrooms, teachers use primary sources as tools for learning across curriculum areas. Primary sources are first hand accounts of an event documented by a person or people who are present at a particular time or during an event.

Inquiry in social studies encourages students to think critically about primary sources. Students ask questions, make predictions, observe, and draw conclusions as they interact with the documents. They plan to learn more about the topic by conducting research that requires reading and writing about informational texts.  Students will write about what they have learned, often keeping a notebook or collection of what they have learned.

Students also develop research and nonfiction reading skills in social studies. Students read nonfiction texts to learn more about the concepts and topics. They will as a class read about a topic, write what they have learned, and record their learning through writing, drawing, and other class projects.

| Units | Essential Questions | Outcomes |
|---|---|---|
| **Reading and Making Maps** | ● What do maps show?<br>● How do maps represent our world?<br>● How do you think the world (starting with our perceptions) could change if the map looked differently? | ● compare different kinds of map projections and how they represent the world differently<br>● Relate how geography impacts the cultures they are studying. .<br>● Learn that North America is made up of three countries.<br>● Use maps and globes to identify significant physical features of each of the 7 continents. |
| **Geography and its Effects on People** | ● How does geography affect where people live and what they do?<br>● How do human interactions with the physical world affect the environment?<br>● How do humans adapt to the environment to meet their needs for survival?<br>● Why do maps of the same location change over time? | ● Locate all the continents and some major physical characteristics on each continent (e.g., lakes, seas, bays, rivers and tributaries, mountains and mountain ranges, and peninsulas, deserts, plains)<br>● Locate the oceans of the world, and explain the importance of oceans and how they make the world habitable.<br>● Explain how the location of landforms and bodies of water helps determine conditions (i.e., climate, weather, vegetation) for habitable living.<br>● Read/research to learn about the history, culture, language of a particular continent. |
| **Migration and Cultures** | ● What might be some of the greatest challenges and rewards for immigrants to a new country? How might | ● Investigate reasons why people migrate (move) to different places around the world (e.g., explore articles or texts)<br>● Conduct interviews with family members, neighbors, friends, or school staff to discover where their families came from, how and why they moved to |

| | | where they now live, and when and why their families came to Massachusetts<br>● Identify the significant impacts of migration<br>● Explain how the community is enriched by contributions from all the people who form it today |
|---|---|---|
| | various immigrant groups from different periods of U.S. history have answered this question?<br>● How has immigration influenced the laws we have in the United States today?<br>● Why do cultures have traditions and customs?<br>● How should we show respect for other cultures? | |
| **Countries and Governments** | ● What makes a country unique?<br>● What is the purpose of government?<br>● What is culture? | ● Recognize the difference between physical geography and political geography.<br>● Identify how one country distinguishes itself from others by considering its history, culture, language and type of government.<br>● Identify some purposes of government such as to provide for security and education.<br>● Locate and analyze information and present a short research report on the physical features, resources, and people of a country outside the United States. |
| **Resources and Choices** | ● How do we responsibly use the earth's resources?<br>● How can communities ensure all have the resources they need? | ● Explain relationships between natural resources and industries<br>● Distinguish renewable resource from a non-renewable resource<br>● Compare and Contrast choices in spending that people make<br>● Compare and contrast why people save money |

## Music

Basic music reading skills, including song form analysis, identifying verses and phrases, and identifying rhythms and melodic shape are developed. Solfege syllables are used to communicate pitches in a melody, and the half note and whole note rhythms are added to their rhythmic knowledge. Ostinato patterns are clapped and performed on instruments, and students first experience singing partner songs and rounds. Emphasis will be placed on understanding expressive qualities such as dynamics and tempo and how musicians use them to convey intent. Students will learn to play songs on the recorder with appropriate technique and with basic music reading skills.

| Essential Questions | Outcomes |
|---|---|
| <ul><li>Why do you think we learn to play the recorder?</li><li>How do you correctly produce a tone on the recorder?</li><li>Why do people play instruments all over the world?</li><li>How can your musical knowledge help you learn to play the recorder?</li></ul> | <ul><li>Demonstrate the correct hand position for recorder.</li><li>Produce tones on the recorder with appropriate technique.</li><li>Perform songs on the recorder.</li><li>Read and identify pitches in treble clef and play them on the recorder.</li><li>Read and identify half notes and whole notes.</li><li>Perform ostinato patterns with melodies.</li><li>Identify basic forms in music.</li><li>Interpret expressive qualities in music.</li><li>Sing in two parts and perform on stage for the school concert.</li></ul> |

## Visual Arts

Second graders will demonstrate knowledge of a variety of media and techniques that include drawing, painting, collage, sculpture and printmaking. Student artwork will reflect personal experiences and relate to students' cultural and social backgrounds.  Students will also demonstrate knowledge of color mixing, lines that show edges, complex shapes, forms, and patterns as they relate to compositions that elaborate on their knowledge of observation, abstraction, invention and expression. Students will also be able to edit, revise and respond to their artwork and the artwork of others.

| Essential Questions | Outcomes |
|---|---|
| <ul><li>How does collaboration expand the creative process?</li><li>How does knowing art histories and cultural traditions help us create works of art?</li><li>How does the presenting and sharing of objects, artifacts, and artworks influence and shape ideas, beliefs and experiences?</li><li>How does learning about art impact how we perceive the world?</li><li>How does art develop our understanding of the lives of people of different times, places and cultures?</li></ul> | <ul><li>Create drawings, paintings, and collage that express complex ideas from their personal experiences and cultural connections.</li><li>Apply printmaking techniques to transfer images from one surface to another.</li><li>Compare and contrast art objects/works that are both functional and aesthetic.</li><li>Express ideas and opinions about art work demonstrating their use of art vocabulary.</li><li>Mix secondary and tertiary colors using their knowledge of color theory and exhibit line variation through contour lines, and different patterns and textures.</li><li>Compare and contrast organic shapes, geometric shapes and different representations of the figure.</li></ul> |

## Health

Students will learn the basic characteristics of physical growth and development, including body functions and systems throughout the life cycle, and will acquire skills to promote and maintain positive growth and development.Students will gain the knowledge and skills to select a diet that supports health and reduces the risk of illness and future chronic diseases. Students will acquire knowledge about emotions and physical health, the management of emotions, personality and character development, and social awareness; and will learn skills to promote self-acceptance, make decisions, and cope with stress. Students will learn that

relationships with others are an integral part of the human life experience and the factors that contribute to healthy interpersonal relationships, and will acquire skills to enhance and make many of these relationships more fulfilling through commitment and communication. Students will acquire the knowledge and skills to be competent in making health-enhancing decisions regarding the use of medications and avoidance of substances, and in communicating about substance use/abuse prevention for healthier homes, schools, and communities.

| Essential Questions | Outcomes |
|---|---|
| ● What makes me unique?<br>● How are family and friends important to health?<br>● What strategies can I use to cope with strong feelings?<br>● How can goal-setting improve health?<br>● What healthy strategies can you use to cope with bullying?<br>● How do our behaviors affect our bodies?<br>● How do our health-related habits affect others?<br>● How can our behaviors impact our future? | ● Apply methods to accommodate a variety of feelings in a constructive manner in order to promote well being.<br>● Explain and practice a model for decision making.<br>● Explain how coping skills (such as perceiving situations as opportunities, taking action/exerting control where possible) positively influence self-concept.<br>● Identify behaviors and environmental factors that influence functioning of body systems.<br>● Describe how the body fights germs and disease naturally and with medicines and immunizations.<br>● Describe how tobacco and prolonged exposure to cigarette smoke affects the body.<br>● Identify the key nutrients in food that support healthy body systems<br>● Use MyPlate and its concepts of balance, variety, and moderation to plan healthy meals and snacks<br>● List rules for general safety at home, school, community, and play, and explain why the rules are important<br>● Name persons and community helpers (such as police officers, firefighters, and emergency medical personnel) who can be contacted to help with health, safety and injury prevention and describe the appropriate procedures for contacting healthcare personnel in an emergency<br>● Describe personal responsibility for reducing hazards and avoiding accidents |

## Physical Education

Students will, by repeated practice, acquire and refine a variety of manipulative, locomotor, and non-locomotor movement skills, and will utilize principles of training and conditioning, will learn biomechanics and exercise physiology, and will apply the concept of wellness to their lives.

| Essential Questions | Outcomes |
|---|---|
| ● How can we move efficiently and effectively? | ● Demonstrate dribbling, passing, and shooting in soccer.<br>● Demonstrate football throw, football carry, and grabbing a flag. |

| | |
|---|---|
| ● Why is it important to be physically fit and how can we stay fit? | ● Offer conflict resolution strategies. |
| | ● Analyze and debrief their group's performance during small and whole group activities. |
| ● How do we interact with others during physical activity? What does it mean to be part of a team? | ● Demonstrate dribbling, shooting, passing skills, and moving without the ball to get open. |
| | ● Demonstrate bump and set technique, under and overhand serves in volleyball. |
| ● What are the primary skills and essential rules used in soccer, flag football, basketball, base games, and volleyball? | ● Demonstrate proper technique for holding a noodle hockey stick, a q-tip hockey stick, and a short-handled hockey stick. |
| ● How does measurement pertain to sporting events? | ● Demonstrate how to catch a fly ball, ground ball, and how to hold a bat or racket. |
| ● What is the primary goal of a manipulative skill game? | ● Differentiate between a sprint race using knowledge of measurement. |
| ● What are the three basic event groups in track and field? | ● Demonstrate proper technique for throwing a shot put, javelin, and proper long jump. |

## Digital Literacy

Early elementary school students are introduced to foundational concepts by integrating basic digital literacy skills with simple ideas about computational thinking. They learn that tools help people do things better, or more easily, or do some things that could otherwise not be done at all. Through the exploration of differences between humans, computing devices, and digital tools, students begin to understand if, when, and how they should use technology.

| Essential Questions | Outcomes |
|---|---|
| ● How can I use technology safely, respectfully, and responsibly? | ● Explore what it means to be a good digital citizen. |
| | ● Observe and describe how people use technology and how technology can influence people. |
| ● How can I use digital tools to collaborate and communicate about ideas? | ● Develop basic use of digital tools to communicate or exchange information. |
| ● How can I use computational thinking to generate solutions to an identified problem? | ● Create and enact a simple algorithm. |
| | ● Create a simple computer "program." |
| | ● Use basic models and simulations. |