

## Science

The science curriculum in fourth grade focuses on practicing scientific & engineering skills within science content. Students will investigate three topics: life science (Insects), physical/earth science (Sight, Light & Stars) and physical science (Forces & Energy). The insect unit uses observations of live insects to guide student questions. The unit culminates with a design an insect project that is used to assess student understanding of structure and function, adaptations, and life cycles. In the Sight, Light & Stars unit students explore and experiment with light and waves. They also practice developing models and build an understanding of the relationship between earth, moon, sun and stars. In the new Forces & Energy unit, students practice designing and implementing their own investigations around forces, friction & energy. The unit culminates with a design challenge to build a chain reaction machine.

## Social Studies

Fourth graders study the *Early Explorations of the New World* by the Vikings, the Maya, Aztec, and Inca civilizations that existed in Central and South America along with their locations, prominent features, and the impact of the conquistadors. Another major unit of study is *Colonial America*. Students study how and why people colonize; and the reasons that political principals of the United States were largely shaped by the English colonists. Within these major units of study, the concepts of location, place, human interaction with the environment, and movement, and regions are emphasized.

## Visual Art

In fourth grade, students will expand their awareness and sensitivity to include more challenging, in depth subjects using a variety of media and techniques. There is an increase focus on the element of value and spatial relationships. Focus moves from self-expression to include drawing/painting from direct observation and imagination. Students use problem solving, observation, analysis and self-assessment to create, analyze, and refine works of art. They express specific concepts, including, still-life and value, using the Elements of Art and the Principles of Design. Students follow a sequential creating process and can communicate this process to others. Work includes drawing, painting, printmaking, collage and sculpture/construction. Instruction targets Visual Art domains of **Communications and Expression, Design and Composition, and Methods, Tools and Techniques** and addresses the Massachusetts Arts Curriculum Framework Categories of **Creating, Presenting, Responding, and Connecting** in an age appropriate way.

## Music

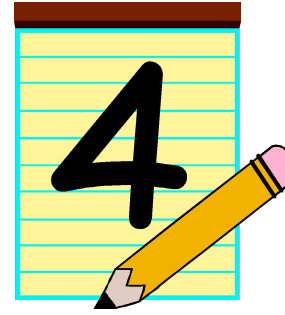
Fourth grade music expands students' understanding of music concepts introduced previously with greater focus on performance, analysis, improvisation, and composition. Instruction continues to focus on the use of a healthy singing voice with the goal of being able to accurately perform one and two part music as part of a Choral Ensemble. Students may elect to begin a band instrument, in addition to previously introduced string instruments. Instruction addresses the Massachusetts Arts Curriculum Framework Categories of **Creating, Presenting, Responding, and Connecting**.

## Physical Education

The fourth grade elementary physical education program is designed to teach children motor skills and skill themes that are developmentally appropriate for their age. Motor skills are taught within the context of skill themes. "Skill themes are fundamental movements that are later modified into the more specialized patterns on which activities of increasing complexity are built. Once the basic skills are learned to a certain degree of proficiency, they are combined with other skills and used in a more complex setting, such as those found in dance, games, and gymnastics." (Graham, Parker, Holt/Hale, 1999)

## Media & Digital Learning

The media and digital learning curriculum integrates information and technology literacy skills with classroom curriculum learning. Students learn keyboard fluency, text editing for spelling and grammar usage, and how to locate information through a subject or keyword search. They learn research skills to support information gathering and writing. Students download images and practice citing their sources. They learn to save and retrieve their work responsibly. For instance, students studying Exploration read maps, gather facts from print and electronic sources, and present new knowledge using traditional and electronic tools. This area of the curriculum is assessed within the context of the activity in which it is embedded.



# NEEDHAM PUBLIC SCHOOLS

## Grade 4 Progress Report Parent Brochure

### The Progress Report

This progress report is intended to *complement* existing parent conferences and to provide you with additional information about your child's progress toward mastering grade-level learning expectations. It reflects the district's belief that students should be engaged in challenging academics as well as ongoing social emotional learning experiences that are grounded in clearly defined and developmentally appropriate standards.

This report is designed to communicate students' progress in a way that descriptively reflects what they know and are able to do in relation to the state curriculum standards. The parent brochure outlines the categories that are included in the report for each curriculum area and provides a description of the characteristics associated with proficiency in that category. Please note that:

- A student's achievement is reported separately from effort.
- In each reporting period, the skills that are taught are assessed against a benchmark.
- Numerical levels are used to report performance with respect to the grade level learning goals.
- The system is designed to describe how well a student is progressing with respect to mid and end-of-year grade level expectations, rather than in relation to other students in the class.
- Teachers use this information to inform instructional practices that address student learning needs.

Please keep in mind that this report represents just a snapshot of your child's progress at a particular point in time. The information presented here, in conjunction with your conference with the child's teacher, provides a more comprehensive picture of your child's overall progress.

All of the staff in the Needham Public Schools remain committed to working in partnership with you to provide a meaningful learning and growth experience for your child.

Proficiency Scale – SEL	
<b>E</b>	Established
<b>D</b>	Developing
<b>B</b>	Beginning
<b>NY</b>	Not yet observed
<b>*</b>	See separate progress monitoring report

### Social Emotional Learning (SEL)

Social and Emotional Learning (SEL) is the process through which children acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions.

At the elementary level, the Responsive Classroom Approach is used to promote well-designed practices intended to create safe, joyful, and engaging classroom and school communities. The emphasis is on helping students develop their academic, social, and emotional skills in a learning environment that is developmentally responsive to their strengths and needs. The process of Social Emotional Learning is dynamic and lifelong. Social and emotional competencies change and grow influenced by an individual's developmental period, experiences, and external factors with no real "stopping point" to skill development. With this in mind, the proficiency scale for SEL measurement is meant to provide feedback about your child's current strengths and areas to focus on for continued growth.

### English Language Arts (Reading)

Fourth grade readers use a system of strategic actions that include phonics and word analysis, meaning, and language structure in an integrated way to read texts with understanding. They read fluently with phrasing and expression. When reading new texts, they slow down to problem-solve unknown words and quickly pick up the pace again to focus on the meaning. The students learn to use comprehension strategies such as making connections to their own lives, their world, and other known texts; making and confirming predictions; and summarizing important ideas. They continue to hone their ability to infer what's implied but not stated and integrate text information with their own knowledge to create new understandings (synthesize). Fourth graders analyze texts, examining words that create sensory images or feelings and they evaluate and think critically about the ideas.

Adjusting their reading for different purposes, fourth graders learn to read a variety of genres including informational texts, poetry, fiction, and literature from diverse cultures. They read to learn new information as well as for enjoyment. The students learn to distinguish the characteristics of different genres (e.g. fiction, nonfiction, drama, poetry). They identify themes and main ideas, compare and contrast different points of view, and find evidence (details) from texts to support their thinking. Fourth graders learn how non-fiction texts are organized (e.g. cause and effect) and how to use charts, graphs, diagrams and other features of informational texts. They also examine the structures and elements of fiction (e.g. plot, setting, characters, problem, solution).

Fourth graders use language to communicate their ideas in discussions. They listen to other students' ideas, pose questions, and add their own information. They communicate their understandings of texts in written form, using evidence to support their thinking.

**Language and Word Study**—Fourth graders learn and use new vocabulary in the context of texts, as well as solidify their phonetic and word analysis knowledge (e.g. letters, syllables, word families, root words, prefixes, suffixes). They use grammar knowledge (e.g. nouns, verbs, adjectives, adverbs) to read and write texts. Fourth graders recognize many regular and irregular words that appear frequently in texts and learn about words that sound alike but are spelled differently (homophones), multiple meanings of words (homographs), and words that have the same or opposite meanings (synonyms, antonyms).

### English/Language Arts (Writing)

In fourth grade, teachers look for evidence that a student can independently use the steps of the writing process. Students write in a variety of genres, including personal narrative, fiction, informational, and persuasive pieces. Multiple samples of writing inform a student's grade. Because various genres are taught at different times during the year, a student's grade in June could differ from that in January.

**Writing Process**-- Proficient writers write for a sustained amount of time. They generate ideas, plan, draft, revise, and edit their writing, incorporating feedback from adults and peers.

**Structure**-- Proficient writers provide a meaningful introduction and conclusion. They organize and connect ideas in logical order according to genre.

**Development**--Proficient writers include well-developed and organized paragraphs that support the main ideas or story. They elaborate with details and evidence that support the reader's understanding, using voice appropriate to the genre.

**Conventions**--Proficient writers apply rules for punctuation, grammar and usage, paragraphing and capitalization.

### Mathematics

Needham's elementary mathematics program balances mathematical skill fluency with the development of conceptual understanding and problem solving within the following domains of the Massachusetts Common Core Standards:

**Operations & Algebraic Thinking**- Proficient students are able to solve multi-step whole number word problems using the four operations. They are able to represent these problems using equations and, assess the reasonableness of answers using mental computation and estimation strategies. They are able to find all factor pairs for a given whole number from 1 to 100, recognize that a whole number is a multiple of each of its factors, and determine whether a given whole number is a multiple of a given one-digit number.

**Number & Operations in Base Ten**- Proficient students recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. They are able to use place value understanding to round multi-digit whole numbers to any place, and fluently add and subtract multi-digit whole numbers using the standard algorithm. They solve multiplication facts through 12 x 12 and related division facts by June with accuracy, efficiency, and flexibility. They are able to multiply a whole number of up to four digits by a one-digit whole number, and to multiply two-digit numbers using place value understanding and properties of operations. They are able to divide four-digit numbers by one-digit numbers with and without remainders using place value or relationships of numbers.

**Number & Operations--Fractions**-Proficient students can explain, recognize and generate equivalent fractions. They are able to compare and write like and unlike fractions using the appropriate symbols (<, > or =). They can multiply a fraction by a whole number, and add two fractions with like denominators. They are able to express fractions with denominators of 10 or 100 as decimals and compare two decimals by reasoning about size.

**Geometry & Measurement**- Proficient students know relative sizes of measurement units and can express larger units in terms of smaller ones. They can draw and identify points, lines, line segments, rays, angles and perpendicular & parallel lines. They can classify two-dimensional figures based on the presence or absence of angles of a specified size. They can solve word problems involving distance, intervals of time, liquid volumes, masses of objects and money.

**Standards for Mathematical Practice** --The Standards for Mathematical Practice describe the types of thinking and behaviors students engage in as they are doing mathematics. Proficient students make sense of problems and persevere in solving them. They know how to select and use appropriate tools to solve problems. They communicate clearly about their mathematical ideas. They listen to, make connections to, and offer feedback about the ideas of others.

Proficiency Scale - Academic	
<b>4</b>	In addition to meeting the standard, the student is able to make in-depth inferences and applications that extend beyond what was taught. The student exceeds the January/June standard.
<b>3</b>	The student meets the January/June standard.
<b>2</b>	The student is progressing towards meeting the January/June standard.
<b>1</b>	The student needs more review & reinforcement, requires constant teacher support and assistance to learn and use information. The student is having difficulty meeting the January/June standard.
<b>-</b>	Not taught during this reporting period.
<b>*</b>	See separate progress monitoring report.

