



**SECOND "GRADE EXPECTATIONS"**

**MATH**

Integral to our math program is the development of deep conceptual understandings of the number system, place value, addition, subtraction and early algebra. We do this through a variety of ways, but what is critical is that our math work has real-life application and that it is constantly being integrated into all times of day (during morning meeting when they look at how many kids are present in school or when they are making their own graph of what is the most popular playground structure). They also read a variety of books that touch on various mathematical concepts and ideas.

Children learn best through real problem solving experiences and where problems can be solved using a variety of strategies and individual approaches while meeting national mathematics standards. Students at each grade level to explore theories and functions through investigation, to develop a variety of strategies to solve problems and share their solutions, and to see math in the world around them. Students work in depth on a small number of problems, actively using mathematical tools and consulting with peers as they find their own ways to solve the problems. Significant time is allowed for students to think about the problems and to model, draw, write, and talk about their work. Each investigation is divided into several class sessions, approximately one hour long, and grouped together to reflect the continuity and flow of the activities as they actually happen in the classroom. During each investigation students work a number of activities that include pair and small-group work, individual tasks, and whole-class discussions. Math discussions are encouraged, where students can share and explain their strategies and thinking. Children represent their perspectives and findings through numbers, words, and pictures. Assessments occur through observations, studying student work and end of unit assessments.

**Focus: Place value notation & addition & subtraction strategies are a major focus of second grade. Building fluency with addition & subtraction.** Our Second Graders start the year with a deep investigation of the number line and bead string and focus strongly on numbers and operations regarding our Base Ten counting system. They also focus on Habits of Mind to help aid them in their mathematical explorations. They then begin to work with word problems (both addition and subtraction) through real life scenarios that tie math to the children's lives. Once these routines have been established, money, counting and currency are introduced. Time and measurement are then introduced. All of this provides our second graders with real life knowledge of mathematical practices in terms of addition, subtraction, measurement and data collection and analysis.

<b>Math Units</b>	<b>Goals</b>
Habits of Mind: Becoming a Mathematical Thinker	A unit that helps us develop routines and a mathematical community of discourse.
TERC Counting, Coins, & Combinations	This unit focuses on counting and comparing quantities, composing and decomposing numbers, and understanding the operations of addition and subtraction. Second Graders develop strategies for comparing, combining, and doubling quantities, as well as taking one quantity away. They compose & decompose numbers and achieve fluency with three sets of addition combinations. Fact fluency and interpreting story problems in addition & subtraction continues.
TERC Stickers, Number Strings, & Story Problems	Second Graders are asked to solve problems with multiple addends and consider whether order matters in addition. Students revisit addition and subtraction story problems, investigate even and odd numbers, and begin to make sense of counting by groups and place value (tens and ones). Work on addition combinations continues as students achieve fluency with the Near Doubles.
Money Work	Exposure to money, start working with quarters.
Money Equivalences Unit	Creating coin equivalences
CFL T-Shirt Factory	Developing place value and developing an understanding of equivalence
TERC Shapes, Blocks & Symmetry (Geometry)	Students identify two- and three-dimensional shapes, focus on the properties of rectangles and rectangular prisms, and identify and create symmetrical designs. Students also

	achieve fluency with the doubles addition combinations.
TERC Measuring Length & Time	Measurement Students investigate linear measurement as it applies to length and distance. They work with a variety of linear units, including standard units of inches, feet, yards, centimeters, and meters. Students build on their work with telling time as they measure, record, and calculate duration of events using timelines and schedules.
TERC How Many Tens? How Many Ones?	Understand place value. Use place value understanding & properties of operations to add & subtract.
Early multiplication	Developing early ideas about multiplication and equal groups.
TERC Parts of a Whole, Parts of a Group (Fractions)	Students investigate what fractions are and the many ways they can be represented and used. They partition circles & rectangles into 2, 3 & 4 equal shares. <i>*Please note that fractions are not part of the standards for grade 2 and are additional.</i>
TERC Partners, Teams, & Paper Clips (Extending Addition & Subtraction)	A culmination of the number and operations work students have done in Grade 2. Students refine their strategies for adding and subtracting numbers as they work toward developing fluency with addition and subtraction of two-digit numbers up to 100. They investigate and make generalizations about what happens when you add even and odd numbers. They learn the remaining single-digit addition combinations, achieving fluency with all single-digit addition combinations. Work continues with telling time, place value, and coin combinations.
TERC Pockets, Teeth, and Favorite Things: Data Analysis	Students engage in all the phases of data analysis as they pose questions, collect and sort information, and make representations of data as a way of sharing their findings with others. They work with Venn diagrams and line plots, and they read and interpret a variety of representations of numerical and categorical data. Students are also assessed on fluency with the +10 addition combinations.
Subtraction Unit	Developing fluency with subtraction across models (removal, difference, comparison and part/whole)

*\* The Co-op School uses TERC Investigations of Number, Data, and Space along with Math in the City's Contexts for Learning Mathematics (CFL), programs that embrace individual approaches to problem solving while meeting national mathematic standards, form the foundation of our math program.*

## LITERACY

### Workshop model:

Students learn to listen, speak, write and read for a variety of purposes. They receive directed instruction to the skills they need to be successful and have opportunities to practice and apply those skills. The reading and writing workshop model is used, supported by *Units of Study for Teaching Writing* and *Units of Study for Teaching Reading*, workshop-based literacy instructional programs that were developed at Teachers College at Columbia University. Teachers begin by modeling one reading or writing strategy in a mini lesson. Students practice the focal strategy independently, with partners, and in small groups while teachers circulate and provide guidance. Selected students share their work to build confidence with sharing ideas and public speaking.

### Balanced Literacy:

We use a balanced literacy approach, a researched and proven method which recognizes the need for both the explicit teaching of skills such as sound-symbol correspondence, phonemic awareness, encoding and decoding as well as the opportunity for children to participate in activities that are designed to build comprehension and meaning. Balanced literacy instruction provides students with opportunities for differentiated instruction, including small group work targeting specific needs in comprehension, phonics, grammar, spelling, and vocabulary building. Groups are formed on the basis of common needs and are fluid, recognizing that children may need different tools and supports at different times.

### Literacy Assessment:

The literacy development of our students is assessed in a variety of ways and is used to inform instructional decisions for both the class as a whole, and for individuals. Assessment takes many forms. Teachers gather information during daily lessons and through careful examination of student work. Each reading and writing unit includes assessments used to evaluate student understanding of content, and benchmark assessments are used to evaluate reading fluency and comprehension as well as writing skill and development. Assessments are designed to be age-appropriate and individualized.

### Reading:

Students in Second Grade build on the decoding and sight word skills they developed in first grade, becoming more fluent readers capable of tackling longer books. Second graders comprehension and love for reading grow as they choose favorite authors and chapter series to enjoy. For example, as students read multiple books in a just-right series, they develop a stronger understanding of story structure and of characters, leading them to new insights and sparking literary discussion with peers. Literature discussions help students to make connections among texts according to topic, genre, and writing style.

Students are exposed to a variety of genres, authors, and themes connected to their project work. Readers continue to expand their sight word vocabularies and to explore word families and spelling patterns. Games and fun activities help students to practice and internalize decoding, sight word and comprehension skills.

**Writing:**

Second Grade writers explore ways to extend their drawing, writing and self-expression skills. Their published pieces become longer and more detailed. Use of writing conventions is more advanced, and peer editing becomes a greater resource during the revising and editing process. Writers learn about opinion writing and using words to be persuasive. Students extend their research skills during their project work and learn how to incorporate facts and events into their writing. More opportunities to share ideas within whole and small groups is an important part of students developing their voice and skills as writers. Second graders review and practice letter formation with regular handwriting practice and their spelling grows through the introduction of sight words and word study work with spelling patterns.

Reading Units	Goals
Launching the Reading Workshop. Why We Read & Why We Read Together	Students practice the routines and procedures needed to be successful in the reading workshop. They identify and practice strategies for decoding tricky words, as well as active reading strategies that promote comprehension. They are assessed to determine independent reading levels and explore the classroom and the school libraries.
Readers Use a Variety of Strategies to Figure Out Words and to Understand Their Books	Readers continue to practice the routines and procedures of reading workshop and learn new strategies to support reading fluency and comprehension. Readers are introduced to the use of post-it notes and a reading journal as tools that will help them read actively. Strategies include know to visualizing what is happening in the book, describing characters and the setting, using story maps to retell events, and the value of re-reading to understand challenging parts.
Becoming Experts: Nonfiction Reading	Readers learn to use nonfiction text features to find information and increase comprehension. Students practice reading for content and asking questions focused on a specific topic within a nonfiction text. Readers make connections to their inquiry projects and recognize the similarities and differences between the structures in different nonfiction texts. Readers explore different ways to record the information they gather.
Nonfiction Research	Readers apply all of the skills and strategies learned in nonfiction reading to a research project. Connections to the inquiry project support understanding of reading for research. Students identify new ways to use the classroom library and school library to conduct research
Reading Bigger Books	Readers practice elements of reading that will help them read and comprehend longer books. Strategies for building fluency are introduced and practiced. Literary language is explored. Readers distinguish between important events and details, and use that distinction to sequence, organize and summarize as they read.
Deepening Understanding of Characters	Readers practice making inferences about characters by examining characters' words and actions. Readers practice asking questions about characters to notice patterns and make predictions. Readers gather information about a character over the course of a book or series in order to explore how characters develop and change. Characters in different books are compared to find similarities and differences. Students inhabit characters from their books by acting out parts of their books.
Series Book Clubs	Children work within book clubs to explore the ways authors use word choice, figurative language, punctuation, and patterns. Readers reflect on their growth over the course of the year and set goals for summer reading.

Writing Units	Goals
Launching the Writing Workshop	Students practice the routines and procedures for writing workshop and examine a variety of purposes for writing. Writers explore different ways to generate ideas and organize thoughts before drafting. Students discuss ways to strengthen their writing and practice incorporating these techniques as they draft and revise their work.

Personal Narrative	Students review and extend their personal narrative writing skills, with a focus on vivid small moment writing that incorporates dialogue and “showing, not telling.”
Techniques for Narrative Writing	Students analyze mentor texts to learn about aspects of literary craft that strengthen narrative writing, and draw on these works as a model and inspiration for their own writing. Skills developed include writing strong leads and beginnings to stories, capturing the reader’s attention through details, and creating complete endings.
Nonfiction: Information and How-To Books	Writers explore the unique style and features of nonfiction as they write their own How-To books based on a topic they are familiar with. Students revise and edit with peers, using the strategies they’ve practiced throughout the year to make their writing easy for the reader to understand.
Nonfiction Inquiry Writing	Students extend their nonfiction writing skills by researching and writing about a topic connected to their inquiry study (glossary, table of contents, diagrams, maps, bold words, underlined words, headings, subheadings, sidebars, charts, tables).
Persuasive Writing	Writers learn to form opinions and support their thinking with factual information. As experts of their inquiry study, writers use the resources and information they have been gathering to express their opinions. Writers are exposed to the persuasive writing of many authors to learn how to include the important elements of persuasive writing in their own drafts. Peer editing continues to support greater grammar, punctuation, spelling, and revision of ideas.
Poetry	Writers enjoy the poetry of many different authors and use their senses to write their own poems. Student poets use descriptive language, rhyming, and format to write poems about their topics of choice.
Writing Realistic Fiction	Building on students’ understanding of narrative structure and craft, this unit will help students plan and write realistic stories with strong characters and meaningful events. Revision will be used as a tool to heighten suspense and amplify strong parts of the story.

## **SOCIAL STUDIES**

We are creating curriculum with and for children in order to help them think and communicate as readers, writers, scientists, mathematicians, artists and social scientists. Our social studies projects are the core of what is happening in our classrooms. This constructivist way of teaching is absorbed into our classrooms through a Reggio Emilia inquiry-based Open Work/Project Work periods. Projects are planned with attention to state standards, teacher goals and individual classroom interests and curiosities. The term "Project" refers to an in-depth look into a particular topic, usually undertaken by a class working on subtopics in small or whole group, occasionally even individually. The key feature is that it is an investigation, research that involves children seeking answers to their questions. This approach to learning emphasizes children’s active participation in the planning, development, and assessment of their own learning. Long-term projects provide contexts where innate curiosity can be expressed purposefully. This enables children to experience the joy of self-motivated learning.

They read, construct, research, interview and recreate in various mediums. They go on trips, interview experts and have lively debates and conversations. Our teachers are observers and facilitators to the children's interests. They step back and listen. They allow the children to have changes to problem solve. They document their ideas, questions, struggles, connections and insights. Teachers ask provoking questions to gather prior knowledge and learn about curiosities. They present materials that they suspect will engage and elicit even further interest of the study. We are creating curriculum with and for children to help them develop lifelong thinking and communication skills.

Second graders are ready to expand the scope of their study beyond the present time and the immediate area surrounding the school. The interests of students and teachers inform the direction of project work, and New York City provides a rich array of opportunities. Students investigate the diverse geography, identity, cultures, and histories of communities. They research the development of New York City transportation system and structures. They talk about green spaces and renewable energy. They continue to use map skills and constructing to communicate their thinking and deepen their learning.

### **Second Grade’s “NYC Then and Now” Focus**

- NYC/Green Space/Transportation Study
- Bridges

### **Essential Questions Anchoring Studies:**

- How does geography influence where people live and why?
- How and why do communities change over time?
- How are communities the same and different?

- How does geography influence where people live and why?
- How and why do communities change over time?
- What is government and why do people need laws?

**The children will work on some of the following skills and abilities:**

- Developing questions about the community.
- Recognizing different forms of evidence.
- Identifying arguments of others.
- Creating an understanding of the past by using primary and secondary sources.
- Retelling and describing a historical development and community event in sequential order.
- Understanding the concept of time measurements (minutes, hours, days, weeks, months, years).
- Identifying causes and effects.
- Identifying events of the past, present, and future in his/her community life.
- Identifying similarities/differences in communities.
- Asking geographic questions about where places are located and why they are located there, using location terms and geographic representations, such as maps, photographs, satellite images, and models.
- Distinguishing human activities and human-made features from natural events or physical features.
- Describing how his/her actions affect the environment of the community; describe how the environment of the community affects human activities.
- Describing how human activities alter places.
- Describing the goods and services that people in the local community produce and those that are produced in other communities.
- Demonstrating respect for the rights of others in discussions and classroom debates.
- Participating in activities that focus on a classroom/school/community issue/problem.
- Identifying the role of the individual and understand times where social actions are required.
- Showing respect in issues involving difference and conflict.
- Identifying rights and responsibilities of community members.

**MULTICULTURALISM/ANTI-BIAS WORK**

The Co-op School is committed to creating a community of diverse learners, families, and staff members. We believe strongly in embracing and respecting our differences. For us, diversity is about how we connect to each other. As a school we have committed ourselves to further strengthening our anti-bias curriculum through a series of trainings for our families and staff members. To create a foundation for our work, Co-op teachers will share personal histories and investigate their own biases and stereotypes. Our teachers then will thoughtfully create classroom environments and curricula that intentionally reflect the diversity of our school community and beyond. Throughout the school year, teachers and students together will collaborate in creating an inclusive classroom environment which explores differences, identities, and societal stereotypes. At The Co-op School, our aim is to create a welcoming community that is respectful of differences and to teach our students how to successfully navigate our increasingly global society. The goal is for our second graders to be able to recognize and discuss biases regarding physical characteristics and learning abilities.

***Will achieve this by:***

- Ensuring that The Co-op School's Core Values of compassion, uniqueness, innovation, community action and joy, guide our school community on what is important to us.
- Teaching Spanish daily to all our elementary school students.
- Speaking to children in an open way, not shutting down questions.
- Reading books that include diverse individual, cultural, and family identities.
- Reading books that talk about struggles and adversity.
- Through exploring classroom community, members, roles and structures, thinking about what do we need to learn/see/grow in our classroom? Is it the same as our friends?
- Selecting teaching materials and literature that reflect affirming depictions of a wide range of identities.