



**FIRST "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: Addition, subtraction, and strategies for addition and subtraction within 20 are a major focus of first grade. First Graders work on a variety of mathematical concepts, ranging from numbers and operations to data collection to patterns in numbers and, finally, geometry. However, counting and deep mathematical thinking are done throughout the day, for project work or during meeting time, for example. They use real life scenarios to talk involving math, such as measuring their classroom for an upcoming art show. Math discussions and partner work help deepen understanding and conversation. Additionally, they read various books that focus on counting concepts. They also use their classroom counting tool, called a Rekenrek, to assist in the development of their computational skills. It helps in the generation of addition and subtraction strategies and in solving contextual story problems by having the visual representation.

Math Units	Goals
Habits of Mind: Becoming a Mathematical Thinker	A unit that helps us develop routines and a mathematical community of discourse
TERC Solving Story Problems: Addition, Subtraction, and the Number System	This unit focuses on counting to higher numbers (forward and back, sets of objects, comparing larger quantities, composing/decomposing numbers, finding all the two-addend combinations). Students revisit familiar addition activities with variations encourage counting on, and are introduced to subtraction. Through games and story problems, students' develop an understanding of addition/subtraction, using numbers notation to represent these operations, and developing strategies for solving addition/subtraction problems
TERC Making Shapes and Designing Quilts: 2-D Geometry	This geometry unit focuses on two-dimensional shapes and their relationships. Students observe, describe, compare, classify, represent, and compose and decompose 2-D shapes. Students learn to use geometric language to describe and identify important features familiar 2-D shapes. As they sort and describe groups of shapes, they begin to distinguish specific attributes of triangles and quadrilaterals. As a final project, students create quilts by repeating combinations of triangles and squares.
CFL Beads, Shoes and Making Two's: Doubles	The various contexts of this unit encourages children to explore doubles while also strengthening their understanding of one-to-one correspondence.
TERC What Would You Rather Be?: Data Analysis	Students pose questions and collect and sort information about data. They make representations of their findings and share them with others. Students sort a group of

	objects according to a given attribute.
<b>CFL Double Decker Bus: Addition and Subtraction</b>	We tell the story of a little girl's efforts to count the passengers on fast-moving double-decker buses, introducing students to the benefits of using the five-structure to quickly calculate quantities. The arithmetic rack, whose beads mirror the organization seats on the buses, provides a model for solving addition and subtraction problems.
<b>TERC Number Games and Crayon Puzzles: Addition, Subtraction, and the Number System</b>	Students work on composing numbers with two and three addends, and in a variety of contexts, they work with combinations that equal 10 and explore relationships among those combinations. The addition and subtraction work of this unit continues to focus making sense of the operations of addition and subtraction, practicing adding and subtracting single-digit numbers, and solving addition and subtraction story problems. There is a focus on naming and comparing different strategies used for solving problems (counting all, counting on or back, and using known-number combinations). Tools such as objects, the number line, 100 chart are used to model and solve problems.
<b>TERC Twos, Fives &amp; Tens</b>	Students extend the counting sequence, read & write numerals, and represent a number of objects with a written numeral. They add & subtract within 20.
<b>CFL Inventory Organizing &amp; Collecting</b>	Students continue to extend the counting sequence, read & write numerals, and represent a number of objects with a written numeral. They continue to add & subtract within 20.
<b>TERC Color, Shape, and Number Patterns: Patterns and Functions</b>	Students make, describe, and extend repeating patterns & reason with shapes & their attributes. They use this information to determine what comes next or what comes several steps ahead in a repeating pattern. Students also work on constructing, describing, and extending number sequences with a constant increase generated by various problem contexts.
<i>CFL Measuring for the Art Show: Addition on the Open Number Line</i>	This unit builds on children's early addition and measurement strategies within the context of preparing labels for an art show. The open number line is developed as a model for recording children's addition and subtraction strategies.
<b>TERC Blocks &amp; Boxes</b>	Students reason with shapes & attributes. They distinguish between defining attributes and compose 2-dimensional shapes.

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

### Reading:

In First Grade students have daily opportunities to read books of their own choosing. From decoding simple phonetic words, students quickly move towards recognizing word patterns and sight words. Students' reading develops most quickly when they are reading at an appropriate level, so much time is devoted to helping students understand what a "just-right" book is, and how to choose one. Many students enter first grade reading simple pattern books ("This is a plane. This is an orange." etc...) and leave First Grade able to read short chapter books with increasingly complex plots and characters that require sight-word recognition, decoding unfamiliar words, and self-monitoring for comprehension. Group read alouds provide opportunities to deepen comprehension and vocabulary. Nonfiction and fiction books are selected to align with inquiry studies and to promote the sheer joy of reading. Guided reading and book groups are introduced mid-year.

**Writing:**

First Grade writers make tremendous gains in their ability to communicate through the written word. Our priority is to empower children to express and communicate their ideas clearly. First Grade writers draw on their knowledge of letters and sounds to “stretch out” words, listening for each sound and writing a letter (or letters) to represent that sound. “Sound spelling” promotes children’s independence as writers by allowing them to get words down on paper before they know the correct spelling of each word. In the fall the introduction of sight words also begins, with approximately 5 new non-phonetic words being introduced each week for children to learn. As sight words are added to the word all, First Grade writers are expected to spell those words correctly. Word wall words also help First Grade writers make analogies that may help them spell other words correctly (eg. “If I can spell ‘all’, then I can spell ‘call.’”) Over the course of the year First Grade writers progress from writing 3 and 4 page “stories” to longer books with greater detail, stronger writing mechanics and more sophisticated storytelling skills. First Grade writers learn the process of writing: how to plan, revise, edit and publish their work. Writers are introduced to, and have opportunities to write, a variety of genres over the course of the year. Using the program *Handwriting without Tears*, first graders have regular handwriting practice, beginning with a review of uppercase letter formation and then learning and practicing the formation of lowercase letters.

**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 Units	Goals
Building Good Reading Habits	Students learn the routines and procedures of the reading workshop, including engage in partner work and group discussion. Active reading strategies are introduced, including visualizing, predicting, and retelling stories.
Reading Just-Right Books and Using Strategies to Support our Reading	Readers learn pre-reading strategies including, thinking about what we know about the subject of the book (our schema) to make predictions. Choosing just-right books using specific criteria is a skill readers practice and apply as they choose books from the classroom library. Students begin working in small groups based on reading level to practice comprehension, fluency, and decoding strategies specific to their individual needs.
Using the Patterns in Books to Read with Accuracy, Fluency and Comprehension	Learners are exposed to many different genres and types of books to recognize patterns and how patterns can help readers understand what the author is communicating. Students begin to make inferences using clues in the text.
Reading and Talking About Books to Develop Ideas: Spotlight on Comprehension	First Grade students learn that there are particular expressions that readers can use to a book talk started and to respond to each other during a book conversation. Readers begin to use tools (post-it's and graphic organizers) to help them retain their thoughts while they are reading. Students learn to create a picture in their mind to help them understand their books.
Caring about Characters and Becoming Experts in Reading Centers	Students focus on understanding characters, beginning to make inferences about characters, compare characters within different books, and describe characters in great detail. Students recognize that characters can change throughout a story and that the personal connections to characters help them understand what they read.
Nonfiction Reading Strategies: Understanding the Structure of Nonfiction Texts	First Grade students explore strategies for reading and understanding nonfiction text. The different structures of nonfiction texts help readers to understand where to find information (bold, headings, pictures, glossary). Readers learn that nonfiction texts do have to be read cover to cover because there are a variety of ways to record important information when reading nonfiction text (graphic organizers, post-its, journal).
Persuasive Reading	Readers learn that they can form an opinion while reading and support their opinion with facts. Learners are exposed to a variety of texts written to persuade the reader, and they develop strategies for understanding this type of text. Connections to inquiry study help readers use their expert knowledge to understand a topic. Readers learn that different points of view will lead individual readers to forming different opinions.

<b>Book Clubs</b>	Children read multiple books within a series and come together to discuss various noticings, including plot, characters, and making connections. Students are introduced the idea of books as “mirrors and windows,” ways to connect their lives to the text or to connect the text to the larger world.
<b>Readers’ Theater</b>	Students deepen their comprehension and develop fluent and expressive reading through acting out texts.

<b>Writing Units</b>	<b>Goals</b>
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<b>Launching the Writing Workshop</b>	First Grade students learn the routines and procedures for writing workshop. Students establish how to participate during discussions, work with partners, and choose a paper is just-right for their writing. Learners examine what writing is used for in the world and they can use writing for a variety of purposes. Students practice using a growth mindset, challenging themselves to give their best effort and applying strategies like spacing word moving from left to right, and getting ready to write by thinking, telling, and then drawing.
<b>Making our Writing Ready for Readers</b>	Students continue to practice the routine and procedures for writing workshop and strategies that help them prepare their writing for readers. Writers learn to use resource the word wall and charts in the classroom. Writers practice stretching words out by sound write new or unfamiliar words.
<b>Personal Narrative</b>	First Grade writers learn to focus on one “small moment” in a story and develop that idea adding details. Writers learn to use graphic organizers to plan out the parts of their story before they draft, identifying a beginning, middle, and end. First grade writers choose a paper to revise, edit and publish.
<b>Fiction</b>	Students apply their understanding of story structure and characters to write a story of own creation. Student are introduced to the concept of a story arc, with a clear sequence events, a problem and resolution, and a clear main character.
<b>Letter Writing: Authentic and Meaningful Letters</b>	Writers learn to draft letters for an intended audience and purpose, and they may write letters connected to their inquiry study. Students practice writing in a letter format, continuing to use peer editing and independent editing strategies to strengthen spelling, grammar, and punctuation.
<b>Nonfiction Writing: “Expert” All-About Books</b>	Writers pick a familiar topic and write a nonfiction book. Students learn to use many of the features of nonfiction texts in their writing and use sequencing words to help the reader understand.
<b>Nonfiction Research Paper</b>	Students choose a topic and read books about that topic, identifying facts and recording them. Students write, revise, edit and publish their own book about this topic, including distinctive features of a nonfiction book: diagrams, labels, captions, headings, and table of contents.
<b>Personal Narratives</b>	Students revisit the essential genre of personal narrative writing and are challenged to take their writing to a higher level, including the following elements: sensory detail, dialogue, emotions, and background information (who, what, why, where, how).
<b>Poetry</b>	Writers write poetry about a topic of interest and practice using all of their senses to make the poem descriptive and interesting for the reader. Student poets use language that makes readers feel excited and know what it feels like to experience what they are describing. Writers learn what poets do to generate new ideas, organize their writing, and revise the poems.

#### **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.

Our first graders are learning how to act effectively within a school community. Frequent field trips provide opportunities for students to examine the various aspects of their neighborhood and the roles of community members. They record observations, conduct interviews, and create maps. Block play also remains important in the classroom and students often use blocks representationally and deepen their understanding of how structures, businesses, and neighborhoods function.

#### First Grade's "Who we are and Beyond into our Community" Focus

- Neighborhood /What is a Community?
- Focus in on two sections of the neighborhood (ie: Post office, community gardens perhaps)

#### Essential Questions Anchoring Studies:

- How can you define a neighborhood and a community?
- How does a neighborhood meet the needs of the people who live and work there?
- How can residents and neighborhood workers share in the responsibility of caring for their neighborhood?
- How does a neighborhood change over time?
- How do jobs and money affect communities?

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

- Asking questions
- Recognizing evidence to make meaning
- Identifying opinions of others
- Understanding time measurement and the idea of the past
- Cause and effect identification
- Identifying similarities and differences between neighborhoods
- Identifying similarities and differences between themselves and others
- Asking questions about where places are located and why they are located there, using location terms and representations, such as maps, photographs, satellite images, and models. Describe where places are in relation to each other
- Identifying human activities
- Distinguish between wants and needs, goods and services
- Describing how environment affects his/her and other people's activities
- Describing how human activities alter places
- Explaining how people earn money
- Map making skills
- Directionality
- Participating in activities that focus on a classroom or school issue or problem

#### 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 for our first graders is that will able to recognize and discuss gender norms and biases.

#### *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 contain diverse families, gender and races.
- Having discussions about gender norms and biases. Exploring classroom community, members, roles and

**structures - what does it mean to be a boy? a girl? neither?**

- **Connecting gender stereotypes to project work/studies**
- **Selecting teaching materials and literature that reflect affirming depictions of a wide range of identities.**