



CHARLES RIVER SCHOOL

ONE/TWO CURRICULUM

Our multiage One/Two class provides students ages six through eight with a nurturing and collaborative community where children are known and respected for their individual strengths. Students who begin the program in first grade spend two years with our One/Two teaching team, ensuring continuous academic and social growth. Our program is also designed to welcome new students in second grade, integrating them into our classroom community and tailoring our program to fit each child's needs.

Our thematic curricula alternate biennially between the overarching themes of "Community" and "Scientists and Inventions." These thematic units integrate most of the elements of the One/Two curriculum—social studies, language arts, science, math, art, and music, and they provide a meaningful context in which students develop their skills. Interwoven throughout is the exploration of Learning for Justice's four social justice standards of Identity, Diversity, Justice, and Action.

LANGUAGE ARTS

Language Arts is integrated into all areas of the curriculum and includes reading, writing, listening and speaking.

READING

Our goal is for children to recognize the enjoyment that reading brings and the patterns that exist within language for decoding and spelling. The reading program combines a whole-language and guided reading approach with phonetic instruction utilizing the Project Read curriculum. Children read individually, as well as to peers and teachers, and meet in small language arts groups. They express their understanding and appreciation of literature through dramatic interpretations and adaptations of stories. Through lively discussions, children make connections between characters and the plot and learn to recognize patterns of language. Comprehension and critical thinking are important skills that are practiced. This process enables children to develop an appetite for independent reading and to think about literature and language patterns.

Skills

- Acquire sight words
- Begin dictionary skills
- Develop rich, descriptive, accurate vocabulary
- Decode using context
- Decode phonetic elements
- Develop independence in reading
- Read with oral fluency and expression
- Develop comprehension skills
- Respond to oral and written questions
- Discuss content and meaning

- Dramatize stories
- Syllabicate words and apply knowledge to decode
- Read independently

WRITING

Children dictate and write stories using their own resources for content and spelling. As children write, they learn that recording their experiences makes lasting impressions. Children are exposed to the steps of the writing process: writing rough drafts, conferencing with peers and teachers, and revising their work. They are expected to use their phonetic skills within the context of inventive spelling. We use Project Read's Language Circle - Written Expression to teach sentence writing and to explicitly teach adding detail to their written work. Writing within thematic content areas helps students to relate facts and to create longer pieces of writing. Children also draw detailed pictures of observations and write about themselves. We utilize the Handwriting Without Tears program.

Skills

Composition

- Dictate sentences and stories
- Write sentences of varying complexity
- Write sentences and stories to represent personal experience
- Apply phonetic instruction to written work
- Draft, revise, edit
- Create original poems and stories
- Use correct sequence of events
- Describe, using developing vocabulary

Conventions

- Apply knowledge of phonics and word families
- Apply spelling skills in independent writing
- Decode short, long vowel sounds
- Decode consonant blends, consonant digraphs
- Use sight words in writing
- Use inventive spelling independently
- Develop awareness of sentence structure:
 - Develop awareness of grammatical structure
 - Apply rules of capitalization and punctuation
 - Writing in complete sentences
- Penmanship: Handwriting Without Tears
 - Learn/review proper letter formation for upper and lowercase letters
 - Position letters appropriately on lines
 - Use correct pencil grip
 - Develop directionality when writing
- Recognize nouns, verbs, and adjectives

MATHEMATICS

The math program in One/Two is taught by grade due to developing mathematical concepts. There are times throughout the year when grades collaborate on a math project or one grade helps the other further their thinking. One example of this was when the class collected money for UNICEF as a community service project: Grade One sorted the coins and bills collected, and counted each group of coins/dollars to find the totals. They give all the totals to Grade Two who then use an addition-algorithm to figure out the grand total of all the money donated.

ONEs

Through the use of manipulatives, children discover relationships between numbers and patterns. While building basic mathematical concepts they learn to predict patterns in mathematics using manipulatives and written materials. The children's understanding is deepened primarily by manipulating Cuisenaire rods and counters as they explore and learn mathematical relationships. Many other math manipulatives (e.g., unifix cubes, pattern blocks, chips and attribute blocks) are also used throughout the year. Our mathematical units include number sense, numeration, number and geometric patterns, balancing equations, addition, subtraction, missing addends, multiplication as repeated addition, value systems, simple fractions, time, and money. Estimating, predicting, graphing, and problem solving are always part of the math curriculum.

Skills

Number

- Read and write numbers 1-100
- Group by 1s, 2s, 5s, and 10s
- Apply grouping concept when adding and subtracting
- Count quantities greater than 100
- Recognize 1s, 10s and 100s places
- Form addition and subtraction stories
- Solve addition equations
- Solve equations with missing addends
- Introduce multiplication concept as repeated addition
- Document work with stamps, stickers, drawings, symbols, and numerals

Logical Reasoning and Relationships

- Identify and name attributes of sets
- Group by likeness or difference
- Group into subsets
- Organize objects by size and weight
- Introduce intersections of sets
- Reproduce, extend and compare patterns
- Use graph to make comparisons
- Use equalities and inequalities

- Estimate and test hypotheses
- Learn about simple fractions $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$

Measurement

- Time: Tell time - hour, half-hour, and quarter-hour
 - Understand 30 minutes = $\frac{1}{2}$ hour, 60 minutes = 1 hour
 - Gain a sense of time (one minute, 30 minutes, one hour)
 - Sequence times in a day
- Calendar: Understand days, months, date, and seasons
- Linear: Introduce measurement to nearest inch, foot, yard
- Area: Count squares on graph paper
- Introduced to the metric system by using centimeters to measure liquids as well as linear objects
- Mass: Balance, weigh

Geometry

- Name shapes and recognize shapes in structures
- Construct designs with pattern blocks and Cuisenaire rods
- Recognize symmetry

TWOs

In Grade Two, we employ literature and manipulatives which allow the children to 'see' and understand more complex ideas and content. Students learn and solidify mathematical processes using a variety of manipulatives (Cuisenaire rods, Pattern Blocks, Base 10 Blocks, Unifix Cubes, playing cards, dice, money, etc.), further developing their understanding of numeration, place value, more complex patterns, addition and subtraction with regrouping, a beginning understanding of multiplication and division, shapes and their properties, symmetry and asymmetry, logical reasoning, measurement, money, time, and fractions. Hands-on exploration, both independently and in groups, helps students solidify and further their mathematical understanding, and enhances their ability to explain their thinking verbally and in writing.

Skills

Number

- Read and write numbers into the thousands - 0 to 9,999
- Express value of each digit
- Sequence numbers
- Explore different base values
- Form and balance +, - equations
- Add and subtract up to 3 digits with regrouping
- Add with missing addends
- Introduce concepts of multiplication and division
- Identify and form number patterns
- Skip count by 2,5,10

- Subtract single digit numbers from double-digit numbers without regrouping
- Understand and recognize fact families

Logical reasoning and relationships

- Identify attributes
- Order and sequence numbers and objects
- Create original patterns
- Use a graph to make comparisons
- Use equalities and inequalities in sentences
- Guess, estimate, and count
- Recognize odd and even numbers
- Understand fractions as part of a whole
- Solve literature-based problems
- Choose appropriate operation to solve word problems
- Use language of math to describe symbols and operations

Measurement

- Money: Write amounts of money, add, subtract, and make change from a dollar
- Time: Tell time to five-minute intervals using analog and digital clocks
- Calendar: Understand days, months, date, and seasons
- Linear: Measure to nearest inch, foot, yard
- Volume: Measure $\frac{1}{4}$ cup, $\frac{1}{2}$ cup, 1 cup, tsp., tbsp.
- Deepen their understanding of the metric system

Geometry

- Understand symmetry, asymmetry
- Construct designs using pattern blocks
- Properties of triangles, rectangles, squares, and hexagons
- Find the perimeter of a shape
- Explore the concept of conservation of space

THEMATIC STUDIES: SOCIAL STUDIES AND SCIENCE

Our thematic curricula alternate biennially; they integrate most of the elements of the One/Two curriculum – social studies, language arts, science, math, art, and music, and provide a meaningful context in which students develop their skills. Interwoven throughout is the exploration of Learning for Justice’s four social justice standards of Identity, Diversity, Justice and Action.

COMMUNITIES

Under this theme students dive deep into the study of anthropology and how anthropologists think. The theme operates under the following essential questions:

- Who am I?
- Who are we? What is a community?
- How do communities thrive?

This theme focuses on the various communities in our lives, considering how communities thrive and the difference between thriving and surviving. We begin the year as anthropologists, which are scientists that study people and cultures. Anthropologists are curious, open to the world and seek to understand humankind. Throughout this theme, students will interview, observe, question and explore different people and other communities that inform our lives in order to draw conclusions around lifestyle, habits, and beliefs. We explore ourselves and how we identify, noting our similarities and differences before expanding to think about the diverse communities that are important in our lives such as home, school, town, neighborhood, state, social communities, country, continent, world and the geographic environment of each - growing to understand how everything is connected. Throughout this curriculum, we learn the importance of symbols to represent ideas. As we focus on each community, each student creates a community circle with symbols that are representative of what is important to each of them. We later narrow our study to learn about the people that lived on our land first - the Indigenous Nations of the Wampanoag and the Iroquois. We compare and contrast our lives today to those of the past researching and discussing food, clothing, shelter, tools/crafts, and family roles and responsibilities. The year culminates with a research project on a community of choice. This rich theme allows us to better know ourselves, to better understand others, and shape our future.

Topics

- Observation, questioning, record-keeping, analytical reading, critical thinking
- An understanding of anthropology
- What communities need to thrive vs. survive
- Identity and diversity
- Rural, urban, suburban communities (compare and contrast)
- Map reading skills, compass rose - cardinal and ordinal directions
- Cultural traditions/celebrations
- Ecosystems
- Life cycles of trees, plants
- Symbols and the ideas they represent
- Origin of the Massachusetts state flag - social justice perspective
- Redesign of the MA state flag to be more inclusive - action project
- Indigenous people of the Eastern Woodlands

- Sun, Earth and Moon in relation to seasons and climate
- Building and understanding the design of shelters
- Geography of the world - continents, land forms, and oceans
- Research project based on community of choice

SCIENTISTS AND INVENTIONS

Under this theme, students dive deep into the study of science and consider it from an interdisciplinary approach. The theme operates under the following essential questions:

- What is a scientist and what do scientists need?
- What are inventions and why do people invent?
- How do inventions impact the world?

We begin the year by considering what science is and how scientists think. Using the book series Zoey and Sassafras by Asia Citro as both a whole-class read aloud and a source of inspiration, we become scientists ourselves by performing simple experiments and engaging in the scientific process - lab coats and thinking goggles included. We then move to examining simple machines as the building blocks of inventions. We explore, compare, contrast, and research objects of the past with modern technology – a radio with an iPod, a rotary phone with a cell phone. The children also learn about chain reactions and discover how cause and effect works. Shifting focus to the science of engineering, we study biomimicry and how scientists of the past have found inspiration in the natural world. Students then put their scientific thinking to work by studying water as a natural resource and considering how issues of social justice connect to different communities' access to clean water. We analyze how inventions can serve roles that are both helpful and not, and we work together to employ our scientific knowledge as a way to take action and create positive change. This rich theme offers many opportunities for students to immerse themselves in the world around them, and to see how questions work as a pathway towards knowledge, understanding, and a better future!

Topics

- Precision and care when conducting experiments
- Data collection and analysis
- Constructing an understanding of the scientific process
- Simple machines
- Cause and effect
- The engineering design process
- Observation and biomimicry
- Inventions around and the world
- Scientists across time and cultures
- Water in our world
- Pollutants, access to clean water, and social justice
- Science and inventions as “action” to solve problems

WORLD LANGUAGE - SPANISH

We recognize that the grammar of Romance Languages uses a binary gender system. While we strive to maintain the integrity of the history and culture of these languages, we also seek to create inclusive learning environments for all students.

One/Two students continue to experience Spanish through music, and also have an opportunity to work on their listening and speaking skills in a classroom setting once a week. Students continue to build comfort and confidence with speaking a world language, and learn vocabulary and conversational skills through exploration, games, activities, and songs that are linked to the music curriculum and the classroom theme.

ART

One/Two art is a sequential program integrating the life of a student and thematic studies with an in-depth study of studio art. Projects rotate according to the classroom theme for the year.

Shapes. Marks and Lines

- Animal drawings and paintings
- Drawing imaginary imagery
- Sequential drawings that tell a story
- Capture characteristics of objects found in nature
- Create Large-scale collages
- Paint from observation
- Capture facial expressions in a series of drawings
- Draw from natural and man-made subject matter (perspective)

Color

- Review of color mixing with primary and secondary colors plus black and white
- Symbolic use of color in facial expression drawings
- Capture observed color in drawings and paintings of observational subject matter
- Learn to read the color wheel
- Blending dark and light variations of color in paint exploration
- Blending colors in the painting of landscapes and seascapes

Texture and Pattern

- Paper relief faces
- Multi-media creature collage
- Surface textures in clay constructions
- Etching into Styrofoam in a print-making process
- Exploring pattern possibilities through paper weaving
- Exploring animal patterns in mobile construction

3-D Form

- Imaginary construction with wood
- Constructing totem poles with clay
- Stick-mobile construction
- Puppet characters of medieval times with plaster and fabric
- Clay animal sculptures

MUSIC

Students in first and second grade explore music through singing, music games, playing instruments, and various rhythmic exercises. The main goal in first and second grade music classes is to encourage a pure, deep, and lasting love of music.

Singing

- Develop an enjoyment of music
- Match pitch
- Begin to hold a part singing rounds
- Sing various Spanish songs to increase understanding and practice pronunciation

Music Theory

- Learn to read and write rhythmic notation, including quarter, eighth, sixteenth, half, dotted half and whole notes, and rests
- Understand the difference between beat and rhythm
- Understand and demonstrate dynamics, including piano, mezzo-piano, mezzo-forte, forte
- Instrument families

Composition/Creation

- Improvising on varied instruments
- Create movement for songs

Instruments

- Rhythm sticks and various percussion instruments
- Xylophones

Movement

- Show rhythm and beat in body
- Learn and remember steps to various music/movement games
- Collaborate with classmates to create movement

TECHNOLOGY

The technology program at CRS starts with the why – why should we teach technology at all? The answer is we don't teach "technology;" we teach self-reflection, empathy, and problem solving (know themselves, understand others, and shape the future). The medium we work within to accomplish this is digital tools, and we teach students both existing skills and how to learn new technology on their own. While the process of learning new tools is inherently valuable (growth mindset, exploration, logic, sequential thinking, curiosity), ultimately we teach technology because of the opportunities it can provide for students to improve themselves and make a positive impact on the world.

We approach this through focusing on four main curricular categories that spiral throughout all grades (PreK - 8):

- Engineering & Design Thinking
- Multimedia Production
- Programming & Robotics
- Publishing

In the One/Two program, the focus is on learning to setup and use a desktop computer (mouse & keyboard skills), digital graphics, block-based programming and introducing computer science concepts (loops, if/then logic), introducing 3-D modeling, navigating a website, online safety, and creating circuits. Examples include physically installing and plugging in the computer lab desktops, programming story animations in Scratch, modeling houses in CAD software, publishing persuasive awareness posters, and creating online safety video PSA's.

PHYSICAL EDUCATION

Students in first grade work on a variety of skills designed to help improve eye-hand coordination, balance, sense of rhythm, locomotor skills, physical fitness, and overall coordination.

Skills

- Manipulative skills (throw, catch, kick, dribble, strike)
- Balance and coordination
- Locomotor skills (run, hop, skip, jump, leap, slide)
- Social skills, positive self-concept, teamwork and cooperation
- Body and spatial awareness
- Sense of rhythm

Activities

Locomotor skills, fitness activities, pilo-polo, kickball, t-ball, basketball, soccer, volleyball, cooperative games, marching, stations, folk and creative dance, relays, fitness stations, tumbling, balance activities

LIBRARY

One/Two students are encouraged to use the library for its quiet space, to treat library materials responsibly, and to enjoy books. The main goals of the library program are to have students gain an appreciation for a “good story” (literature appreciation), and to recognize that information can satisfy one’s curiosity (information literacy). Children can begin to be able to find resources independently in the library and do more involved tasks such as online book searches. Children are encouraged to enjoy themselves while observing library etiquette so others can concentrate and use their time well.

Literature Appreciation Skills

- Listen and visualize during read alouds
- Participate in discussion of story or other group activity
- Recall and summarize what has been listened to and seen
- Select books of interest at appropriate reading level
- Identify most methods of book illustration, i.e., photograph, watercolor or oil painting, drawing, ink sketch, lithograph
- Use illustrations to acquire a greater understanding of the story
- Understand the difference between an author and an illustrator
- Listen to literature for pleasure and information
- Read, write, and listen to poetry
- Dramatize stories

Information Literacy Skills

- Recognize that library materials are arranged so people can find books or other media
- Strengthen book selection skills by evaluating covers, illustrations, subject
- Differentiate between fiction and nonfiction
- Recognize when information is needed and describe what type of information can be used to solve a problem or answer a question
- Identify the type of source that will answer question(s)
- Sort information in meaningful ways