

**BUCKINGHAM BROWNE & NICHOLS
LOWER SCHOOL**



**CURRICULUM OVERVIEW
BEGINNERS-GRADE 6
2023-2024**

Beginners Teachers

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*** Includes Language Arts, Mathematics and Social Studies instruction**

Email addresses for all Faculty and Staff at BB&N follow this format:
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Beginners Curriculum Overview

Beginner Curricular Philosophy

What does it mean to be a learner and thinker? What is the shape of critical thinking? These are the questions that inform the Beginner Program, shaping a deeply integrated, research-based, child-centered approach to the educational experience. In the Beginner classroom we are in a unique position to support young children as they begin to define themselves as thinkers and learners in the school setting. Through our work, we focus on developing habits of mind necessary for critical thinking. Children engage in thoughtful investigations about the world, challenging themselves to think deeply about their interests and questions, discovering new ways of deepening their knowledge.

Our curricular model and the learning that it implies extends far beyond the confines of the classroom or the school building. The Beginner curriculum engages the richness of each child's experience, inviting the breadth of their lives into the core of the curriculum. The ultimate goal of this philosophy is to stimulate and scaffold a passion, respect, and method for learning about and being in the world.

The Beginner Program has a particular vision of the child as a learner. Each aspect of the curriculum relates to this child: an engaged, thoughtful, respectful, and investigative learner. This is what we seek from ourselves, from teachers, from our students, and from our classroom communities. It is with this vision of the child in mind that we outline the structure of our curricular philosophy.

The Child

We begin by addressing the children themselves, and the way they are considered as learners within our curricular philosophy. Children have a unique perspective on the world, and by engaging this stance we are able to access deeper, more meaningful learning. This being the case, we as educators must begin with the unique mind of the young child, addressing the particular thinking and learning of the child in order to create the most effective classroom environment.

First, we see all children as competent, creative thinkers and learners who are actively engaged in the process of making sense of their world. This perspective emerges from the Reggio Emilia early childhood centers, and influences all elements of the program. Each child brings his or her unique understandings of the world into the learning experience. Our curricular practices, environment, and interactions reflect respect for these competent individuals.

The Child (continued)

Children naturally engage in integrated thinking, viewing the world holistically as they create knowledge and understanding. In the Beginner classrooms, we approach learning in an integrated manner, bringing science, math, language arts, and artistic skills to bear as we engage in problem solving. This fusion of knowledge defines the way in which the child acquires information and thinks critically about the world.

This integrated approach to learning is the central component to the Beginner curriculum. We avoid fragmented learning constructs, such as “math time,” “writing time,” or “science time.” Instead, the Beginner Program chooses to celebrate, support, and challenge the complexities of the integrated thinker, who brings all forms of knowledge to bear in the learning process.

The Emergent Curriculum

The basic structure of the Beginner curriculum is founded on the concept of emergence. The curriculum is turned inward, emerging out of the interests and pursuits of the children, rather than focusing on outside dictates from teachers or prescribed curricula. In this manner, the curriculum is founded on subjects that are vital and essential to the children who inhabit the classroom at a given time.

The teacher takes on a nuanced role of observer and facilitator in the context of the emergent curriculum. Teachers engage in a delicate process of observation, documentation, and scaffolding of children’s play. Through this process, the teacher is able to weave a curriculum that embodies children’s interests as well as the academic skills necessary to bring these interests to fruition. In the emergent classroom, teachers look to the children and their experiences to provide the foundation for studies in the classroom. When the preschool children show an interest in the structure and make-up of playgrounds, the architecture and physics of playgrounds might then become a classroom investigation. When we have an unusually heavy snowfall and the children are amazed at the process of freezing, melting, and shaping of snow, this is the vital subject of the moment. All of this work is shaped around the age and developmental needs of the child. As the children engage in work around these concepts, the teachers integrate learning opportunities within the children’s zone of proximal development. In this way, we make the learning in the classroom essential to the children, the curriculum reflecting them and the interests that they share at that particular moment in time. This manner of conceptualizing the curriculum celebrates the integrated thinking of the child and also responds to the constant development and change that young children experience.

Materials are an essential component of the emergent curriculum; materials carefully and intentionally placed in the classroom create the rich landscape from which inquiry can grow. Classrooms are organized to inspire a highly collaborative,

The Emergent Curriculum (continued)

problem-solving approach to learning that allows for the child's vision, action, and voice. Beauty and aesthetics are central to this approach to materials and environment; the beauty of the classroom reflects both a respect for the children in the classroom, as well as a desire to create sustained engagement with that environment. Just as adults are inspired and motivated by beauty, so children respond to the aesthetics of their environment, deepening their thinking and learning to meet the richness of the beauty around them. Teachers carefully consider the individuals present in the classroom, as well as broader experiences with young children, using these understandings to select materials that allow for:

- multi-sensory experiences,
- explorations of scientific phenomena,
- study of language and writing as vehicles for expression,
- mathematical concepts, and
- examinations of social studies in the world.

The emergent curriculum requires trust in the power of play as a vehicle for learning. The young child is a researcher, and his most motivated research occurs in the context of play. In order to harness the most powerful thinking of the young child, the Beginner classrooms frame our work around play, seeking rich play experiences to facilitate inquiry and critical thinking.

Projects In The Curriculum

Projects are ideal for the integrated learning demonstrated by young children as each project engages a wide range of subject matter. The study and investigation of math, environment, movement, observation, expression, science, language, art etc. are essential components of the project approach. All of these components are conceptualized as integrated, each essential to deep learning about subject matter. In the emergent curriculum, teachers offer children tools and language from these academic genres, thus opening the children up to the real life application of these subjects as they relate to child-centered projects.

Through projects, we begin with the children's experiences, interests, and natural investigations into the world around them. These classroom pursuits are the foundation for the project, the engagement in something real and vital to the children and their classroom community. Each skill is then engaged as an outgrowth of this project, emerging as a tool necessary to serve the children's authentic interest in a particular project.

Content Areas

All of the academic elements of the Beginner curriculum are integrated into the framework of the emergent, project-based approach. Each skill or area of knowledge is seen as a tool for investigation and deeper understanding related to the children's genuine interests and inquiries into the world. Each content area addressed below is woven into classroom exploration, investigation, and project work. This allows children to understand academic concepts as powerful, integrated resources with which to approach learning as a whole.

Language Arts

Emergent literacy (pre-reading and pre-writing) is an on-going developmental process. Literacy develops in young children through the observation of functional uses of reading and writing in authentic settings such as home, school, and community. Beginners experience language through a wide range of authentic and meaningful experiences that are designed to meet children at their developmental level.

In Beginners:

- Children are surrounded by a print-rich environment that cultivates interest in language and words.
- Writing is modeled through charts, stories, songs and poetry, and documentation of weekly activities.
- Teachers encourage and support student writing by creating many opportunities to draw, copy, trace, and dictate stories.
- Student authors share diverse forms of writing, learning collaboratively through engagement with peers and teachers.
- Children learn to be a part of an audience by listening to their peers share a wide range of story making (written text, pictorial narratives, dramatic play, and story telling).
- Children listen and respond in numerous ways to books (fiction and non-fiction), poetry, and environmental text.
- Diverse types of reading (story telling, reading text, reading pictures etc.) individually, with friends, and to adults is encouraged daily.
- Children explore sounds through rhyme and alliteration to increase phonemic awareness.
- Children explore the importance of listening carefully to all members of the community, integrating group knowledge into their understandings of the world.
- Children are learning to respond meaningfully to various topics, offering comments and questions to deepen class discussions.

Mathematics

Beginner teachers plan rich environments that allow children to explore math concepts in the context of play. In particular, children explore mathematics as a tool for making knowledge about the world around them. When engaging in project work, children discover the essential nature of math concepts as they support the integrated goals of project work (such as geometry in planning cities or measurement in building a set for a play). Math experiences are everywhere in the Beginner classroom, emanating from the daily experiences in sand/water play, block building, dramatic play, cooking, science exploration, manipulative games, and cooperative play. Some of the math concepts that are scaffolded during the year are:

Number and Number Sense

- Count, recognize and order the numerals 0 to 12
- Demonstrate knowledge of quantity (few, many, less, more)
- Use manipulatives to solve problems
- Learn to share individual critical thinking process with the group
- Understand 1:1 correspondence and accurately counts objects 1-20
- Use positional language and ordinal numbers in everyday activities

Classifying, Sorting and Patterning

- Sort and classify objects by different attributes
- Recognize simple patterns in the environment
- Originate and extend patterns

Geometry and Spatial Sense

- Recognize, and name basic shapes
- Demonstrate ability to complete puzzles using perceptual strategies
- Explore and identify space, direction, movement, position and size

Measurement

- Use non-standard units to measure length, weight and quantity
- Use measurement terms appropriately such as longer, shorter, bigger and smaller
- Use estimation in meaningful ways

Data and Analysis

- Organize and draw conclusions from collected data, such as creating and discussing surveys and graphs

Social Studies

Social studies in the Beginner's classroom are designed to foster a democratic social learning community. Teachers facilitate this growth with books, films, discussions, projects, and through a constant focus on community, justice, kindness, and collaboration. As a part of our work with social studies, teachers are trained in Responsive Classroom, and are guided by these philosophies and practices. The children work closely on concepts regarding rights and their responsibilities as

Social Studies (continued)

members of the community. In particular, the Beginner classrooms focus on concepts of diversity, multiculturalism, and the multiplicity of experiences that each member brings into the community. Supportive and deep thinking on these issues are seen as the foundation for the children's development of citizenship within the school community.

Science

Science is a central element to the ongoing explorations and investigations into the world around us. The goal of science in the Beginner classroom is to help children to learn about the natural environment by organizing materials so that they can discover concepts through their own active involvement and reasoning powers. Science is discovered through a multi-sensory, hands-on approach that emphasizes observing, interpreting, collecting, recording, and predicting information about scientific topics and concepts.

The central goal of science in the Beginner classroom is to nurture the children's natural curiosity while their disposition to inquire is encouraged. This work is facilitated through daily work with classroom teachers, as well as weekly meetings with a science specialist to offer new materials, possibilities, and explorations of new questions. If curiosity and exploration are valued, children's quest for deeper meaning and greater insight about the world around them is fulfilled.

Lower School World Languages

Our goal is to help students to build a foundation for future language learning and to be prepared to communicate as global citizens of an interconnected world. To do this, we want to highlight and embrace student identities and provide an environment where they are comfortable taking risks and applying a growth mindset to language learning.

The Lower School World Language Department uses an approach to teaching languages that focuses on proficiency and communication in an engaging and low stress environment. Teaching with comprehensible input prioritizes the delivery of understandable messages that are personalized, meaningful, interesting, and relevant to our students. The goal of our classes is for students to acquire Spanish or French through communication and active participation. When age appropriate, we aim to spend at least 90% of our classes in the target language focusing on listening and reading to provide input (as opposed to formal vocabulary and grammar instruction).

We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Lower School World Languages (continued)

Spanish

Beginners are introduced to Spanish once a week for 25 minutes using a multi-sensory approach focused on seeing, listening, and doing. Beginner Spanish students are exposed to the language through games, songs, stories, and movement activities. It's important to acknowledge that students come to Spanish class with different experiences in relation to language learning.

Music

Each Beginner attends music class weekly in the Morse Building Music Room. The main objective is for children to enjoy their musical experience as they participate in music activities and explorations with their group.

Beginners music activities focus on the child's musical experience through singing, moving in space, using their bodies to express musical ideas, listening to a wide variety of styles, languages, and genres, as well as exploring unpitched and pitched percussion instruments. The overall objective is for students to use a variety of tools to explore and communicate their music ideas to others.

Rhythm

- Experience pulse in movement/body percussion
- Play unpitched percussion instruments
- Experience moving to a variety of meters
- Sing invented rhythmic sounds (scatting)

Melody

- Differentiate between high/low
- Experience up/down as well as singing in a limited range
- Explore vocal tone production
- Develop a repertoire of songs as a group
- Explore creating songs by singing
- Explore pitched instruments

Harmony

- Experience tonality differences
- Sing/chant with instrumental accompaniment

Form

- Experience same/different
- Experience patterns in songs through games, movement, and instrument play

Music (continued)

Expressive Qualities

- Explore space
- Experience tempo, dynamic contrasts, and timbre contrasts
- Experience unpitched percussion technique
- Create movement/music to accompany stories, rhymes, and poetry

Timbre

- Identify unpitched percussion
- Differentiate between vocal qualities (speak/sing/whisper/shout)
- Demonstrate dynamics (loud/quiet)

Visual Art

In Beginners, the experiential art-making process includes creative hands-on exploration and discovery of a range of art experiences, typically including objects from nature and found materials. The process of creating through sensory-based exploration provides a developmental tool needed in the acquisition of cognitive and physical growth.

Open-ended, sensory-based exploration stimulates a child's brain to grow and develop neural connections that establish links to other areas of learning. The process of creating supports cognitive growth by building skills in numeration, sequencing, cause and effect, and literacy. Our goal is to also develop an aesthetic appreciation of art that applies to all areas of life.

Library

Students visit the library in the Morse building where they listen to stories, select books to take home and begin to develop their library skills. The read aloud time provides an opportunity to:

- Discover the joy of reading.
- Enrich their vocabulary and develop listening skills.
- Talk about the role of the author and the illustrator.
- Read books that may relate to what is being studied in the classroom.

When signing out books, students are able to choose from a variety of titles and genres as well as learn the responsibility of borrowing and returning a book within a given period of time. As the year progresses, students will learn:

Library (continued)

- How the library is arranged by categories.
- What types of books can be found in the library.
- How to find books of personal interests.

Parents are invited to visit the library and borrow books to read at home.

Technology

At the BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years. Through technological integration we give our students an introduction to word processing, spreadsheets and graphing, presentation software, three-dimensional design, internet safety and digital citizenship, online research, robotics, and programming. Our teachers create academic environments that facilitate student creativity, innovation, communication, and collaboration with others, while developing students into critical thinkers, problem solvers, and decision makers.

Physical Development

The Beginner physical education class introduces students to ways they can manage their bodies through movement exploration. This movement education helps the student to develop both mind and body through safe physical activity.

Play:

- An integral component of a child's physical, mental and social development; Beginners are given time to play with and experience a variety of balls and offered equipment.

Manipulative activities:

- Balls and objects are used to introduce the skills of throwing, tossing, catching, kicking, bouncing, striking and rolling.

Locomotor activities

- Patterns of walking, running, jumping, hopping, galloping, and sliding as the students move around, over, under, between and through various objects and apparatus while changing force, direction and shape.

Non-Locomotor activities

- Bending, twisting, stretching, reaching, lifting, raising, turning, curling, changing their body shape.

Physical Development (continued)

Rhythmic Activities:

- Exploring, moving, dancing, creating and warming up to music.

Gymnastics

- Creative movement, animal walks, and balance stunts. Development of the upper body through climbing and swinging on the rope ladder, climbing up the cargo net, and work on the low balance beam.

Group games

- Animal and color themes provide the central focus as we introduce games with simple rules and limited equipment. Changing speeds, levels or shapes with limited equipment.

Relaxation/Belly Breathing/Mindfulness Activities

- In many of our classes, we incorporate quiet, mindful activities as a way to relax and concentrate on our breathing.

Creative Movement

Creative movement at the beginner level exposes our students to self-expression through physical movement and dance. Music, usage of scarves, acting out different characters from stories and coordination skills will all be taught each week. Yoga, mindful movement, and dramatic skills are also woven into the structure of the class.

Responsive Classroom

Responsive Classroom is part of a school wide program to support the development in each individual of a core of important habits of mind that build the positive social emotional components for positive communication, character development, interpersonal relationships, and responsibility to the broader school community. In the Beginners program we focus on the following skills:

- Build class rules and explore what it means to be part of a learning community.
- Learn to sit and positively participate in morning meeting; to share, greet, engage in all activities and be a respectful listener.
- Practice working with a partner and with small groups of peers.
- Accept and understand consequences for actions or comments that may disrupt or hurt others' feelings.
- Show proper use of classroom materials and following class/school rules.
- Become a supportive friend and teammate in games and lessons.

Kindergarten Teachers

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Kindergarten South*	Maria Barton Ben Goldhaber	800-2428 800-2474
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Art	Rory Sullivan	
Library	Lynda Dugas	800-2414
Music	Sara Zur	800-2446
Physical Education	Kelley Kingman	800-2438
Spanish	Carolina Gomez-Kramer	800-2434
Technology	Maria Elena Derrien	800-2491
Movement	Jennifer Lifson	800-2439

*** Includes Language Arts, Mathematics and Social Studies instruction**

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First InitialLast name@bbns.org

Kindergarten Curriculum Overview

Homeroom

In Kindergarten, children develop and strengthen their social and academic skills through discussion, exploration, play, and small and whole group activities. Teachers strive to nurture Kindergartners' insatiable curiosity, while encouraging their growing independence and ability to work cooperatively within a group.

The goal in Kindergarten is to support children in playing and working together in a respectful, cooperative, and caring way. This involves self-reflection, building relationships and partnerships with members of their immediate community, exploring identity, and learning about other communities. Teachers work to foster children's growing self-esteem and their joy of learning.

Language Arts

The Kindergarten language arts curriculum is designed to nurture a love for and enjoyment of literature, to develop an understanding of oral and written communication, and to build confidence in the four components of literacy: reading, writing, speaking, and listening. Kindergarten uses *Foundations* to support handwriting, phonics, phonological/phonemic awareness, and word study.

In Kindergarten, students:

- Build phonemic awareness skills by manipulating sounds and learning to discriminate between individual phonemes;
- Learn and apply sound-symbol relationships and begin to use phonetic skills to decode and encode words;
- Participate in word study activities to increase recognition of high frequency words.
- Explore multiple genres of literature;
- Tell and retell stories, ask and respond to questions, and express overall comprehension;
- Learn to use writing as a creative and effective form of communication through journal writing, project work and *Writer's Workshop*;
- Engage in strategy-based guided reading groups.

A reading specialist works with Kindergarten teachers and students to provide additional support.

Social Studies

Students in Kindergarten engage in social studies curriculum content through project-based work. The chosen curriculum content reflects the various interests of the students and the teachers. Essential questions lay the foundation for social studies project work. These

Social Studies (continued)

questions are designed to engage students in a wide array of learning experiences as they work toward a common goal. It is through these experiences that students build on their existing schema to create new knowledge. Projects additionally allow for the integration of curriculum areas such as math, ELA, science, and art, thus exposing students to authentic applications of these subjects.

Mathematics

At BB&N, we believe that math should be joyful and engaging. Our program grows children's fluency with numbers and is rich in numbers-based experiences. We provide opportunities at every level for students to engage in mathematical explorations, to reason mathematically, and to express their ideas. We strive to strike a balance between larger conceptual understandings and specific skills and procedural fluency. We believe that all of our students can and will learn math.

Math in Kindergarten is all about numbers. Students begin to build their understanding of the number system by learning to ask quantitative questions and then develop the skills to answer those questions including counting, ordering, adding, and subtracting. Students also explore their world using geometry by recognizing, describing, and classifying two and three dimensional shapes.

Kindergarten uses high quality, research-based resources including the Bridges in Mathematics curriculum. Math is taught using a hands-on approach in whole group investigations, small group activities, and individual practice.

In Kindergarten, students will:

- Write numbers 0-20 (may have reversals)
- Count by ones and tens to one hundred
- Add and subtract small quantities
- Build and break apart numbers by place value
- Classify shapes by attributes
- Solve problems in context

Science

Students use a hands-on inquiry-based program to study science. This allows the students to develop and use process skills in order to gain a body of scientific knowledge. Listed below are the units of study and highlights of the content and skills covered.

What is around us? Practicing observation skills while exploring our own "backyard."

- Identify characteristics of living vs. non-living things and create collages of these items.
- Take a field trip to Longfellow Park to collect leaves and sort the leaves based on their attributes.
- Create a leaf creature and a key to identify the leaves.

Animal Observations

- Make detailed observations, draw, and learn about the science animals.

Science (continued)

- Create a factual electronic book about the science animals using the app Book Creator.
- Assemble a black bear skeleton.
- Learn about how a fertile egg develops into a chick and observe and sketch chicks.

Chemistry

- Discover how salt and vinegar can clean pennies.
- Investigate how different liquids interact and make a lava explosion using oil, water, food coloring and salt.

Sound

- Experiment with tuning forks to discover that sound is vibration and can move objects.
- Experiment and test different materials to understand how sound travels in different materials.
- Make hypotheses to determine what types of vibrations make low and high- pitched sounds.
- Challenge students to amplify a sound and then create a roaring “animal”.

Forces and Motion

- Find the center of mass of classroom items and paper bees.
- Learn about Newton’s laws of motion through observation and experiments.
- Investigate friction by rolling marbles on different materials.
- Construct and test a blow rocket to observe the effects of gravity on an object.

Lower School World Languages

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We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Spanish

Kindergarteners explore Spanish once a week for 30 Many Kindergarten students continue to acquire some basic Spanish through songs, stories, games, and movement activities,

Lower School World Languages (continued)

as well as listening to stories. Children continue building upon the language skills they explored as Beginners and take part in activities and lessons in the target language.

It's important to acknowledge that students come to Spanish class with different experiences in relation to language learning.

The BB&N World Language Program from Beginners through Third Grade follows what is known as a spiral model, where students explore many of the same topics year after year but with different challenges at each grade level that build upon the skills learned in the previous years.

Music

Kindergarteners attend music in half groups on a weekly basis. Activities center on the children's experience of music through singing, moving, listening, playing instruments, and creating music through improvisation. Kindergarteners explore topics of social responsibility, environmental care, diversity, and empathy through music. The overall objective is for students to use a variety of tools to explore and communicate their music ideas to others.

The skills students develop include:

Rhythm

- Demonstrate pulse through movement and instrument playing.
- Create rhythms on pitched and unpitched instruments that fit with recorded music.
- Notate rhythmic patterns using invented symbols.

Melody

- Experience melodic shape through movement.
- Improvise melodies on classroom instruments.
- Write down melodic shapes on paper, and "read" melodic shapes and gestures.
- Explore barred instruments (xylophone/metallophone/glockenspiel).

Harmony

- Experience tonality differences.
- Sing/chant with teacher-accompanied Ostinato.

Form

- Experience phrase.
- Experience ABAB patterns.
- Organize original compositions according to a basic pattern.

Music (continued)

Expressive Qualities

- Explore space in movement as related to pitch, beat, rhythm, tempo, and dynamics.
- Experience:
 - Tempo contrasts, dynamic contrasts, timbre contrasts.
 - Global music related to classroom themes.
- Unpitched percussion technique.

Timbre

- Investigate everyday objects and recycled materials and describe sound qualities.
- Become familiar with families of instruments in the orchestra as well as families of percussion instruments.

Visual Art

In Kindergarten, the creative process includes describing, imagining, examining and art making. Children have the opportunity to explore ideas, materials, and the basic elements of art throughout the year. Through actively experiencing a variety of media, children learn how to use simple tools and techniques to make works of art including through paint, collage, assembly, drawing, sculpting and printmaking. Areas of focus typically include nature, personal interest, classroom themes, self-portraits and art/artists.

Library

Students visit the library once a week as a class, where they listen to stories, select books to take home, and begin to develop their library skills. The read aloud time provides an opportunity to:

- Discover the joy of reading.
- Enrich their vocabulary and develop listening skills.
- Talk about the role of the author and the illustrator.
- Use picture clues to aid in understanding material.

When they sign out books, the students are able to choose from a variety of titles and genres as well as learn the responsibility of borrowing and returning a book within a given period of time. As the year progresses, students will learn:

- How the library is arranged by categories.
- What types of books can be found in the library.
- To distinguish between fiction and non-fiction.
- How to browse the library to find material of personal interest.

Parents are invited to visit the library and borrow books to read at home.

Technology

At the BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years. Through technological integration we give our students an introduction to word processing, spreadsheets and graphing, presentation software, three-dimensional design, internet safety and digital citizenship, online research, robotics, and programming. Our teachers create academic environments that facilitate student creativity, innovation, communication, and collaboration with others, while developing students into critical thinkers, problem solvers, and decision makers.

Physical Education

In Kindergarten, lessons continue to focus on the fundamental locomotor and non-locomotor movement skills. Students begin each year with a review of the different ways they have learned to move their bodies.

Play/ Movement Exploration:

- The Kindergarten students experience forming shapes and patterns with the body, rhythmic activities, and combining locomotor, non-locomotor, and manipulative skills into new patterns. Students experience body awareness, body support, and creative movement as they explore floor patterns, pathways, and body levels.

Manipulative Activities:

- Opposition and visual concentration are emphasized with skills including: throwing, kicking, bouncing, catching, passing, and rolling different balls, while varying or controlling the direction and force. The short and long jump ropes are introduced.

Locomotor Skills:

- Learn our own personal and safe space while moving in the gym in a large group: jogging, running, moving while changing direction, learning to skip, gallop, slide, hop, and jump.

Non - Locomotor Skills:

- Stretching, lifting, creative movement in acting games

Rhythmic Activities:

- Music games and moving to music are introduced as the students experience tempo and rhythm, as well as dances in circles, lines, hip-hop and square dancing.

Gymnastics:

- Mats are used for rolls, animal walks, and balance stunts. Work on the low balance beam is continued with more complex walks and balance stunts. Upper body strength develops on the rope ladder, climbing rope, and cargo net.

Group Games:

- The students learn to play as a group in running games that emphasize counting, colors, and imaginary themes while sharing equipment, taking turns, and practicing group respect.

Physical Education (continued)

Mindfulness:

- The students practice mindfulness. The purpose of teaching mindfulness meditation is to help students focus their attention on the present moment.

Responsive Classroom

Responsive Classroom is a school-wide program that supports the development of important habits of mind. These habits of mind cultivate positive communication, character development, interpersonal relationships, and responsibility for the broader school community. In Kindergarten, we work to:

- Build class rules and commit to being positive community citizens;
- Develop morning meeting skills such as active listeners, learning different greetings, practicing eye contact, and communicating with peers, teachers and other adults;
- Speak assertively and respectfully in morning meetings;
- Show responsible behavior moving about campus, within classrooms, and on field trips;
- Learn to seek teacher mediation as needed to resolve conflicts, to use words over actions, and to broaden the base of friendships to include new friends.

Homework

There is no formal, regularly assigned homework for children in Kindergarten. Parents are strongly encouraged to read aloud to their children for a minimum of 15 minutes every day.

Grade One Teachers

		phone/voice mail
First Grade North *	Kathy Tan	800-2454
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Science	Lizzie Rosenberger	800-2441
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Integrated Arts	Emily Discenza	800-2479

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First Grade Curriculum Overview

Language Arts

First Grade Literacy is designed to meet the needs of each student both as an individual and as a member of the classroom community. Reading and writing are integrated into many aspects of the school day so that students come to see these skills as necessary parts of their everyday lives. First Grade uses *Foundations* to support handwriting, grammar, phonics, phonological/phonemic awareness, and word study.

First Grade students:

- Are taught reading and writing in whole groups, small groups and on an individual basis.
- Participate in Readers Workshop to deepen comprehension skills, build reading strategies, and celebrate their growth as readers.
- Learn to choose books at their appropriate independent reading level from classroom collections.
- Listen to quality literature read aloud and share their ideas during group discussions.
- Practice phonics concepts in a sequential and age appropriate manner. Children are given a variety of opportunities to practice and build on newly learned concepts.
- Continue the word study program by increasing their knowledge and recognition of high-frequency words.
- Through daily practice, begin to understand the relationship between the words they see in print and those they use in their writing.
- Observe teachers modeling various writing techniques and have ample opportunities to practice independent writing and share their work with others.
- Write daily in several structures such as stories, factual accounts, letters, and daily journal entries.
- Improve handwriting skills, practice spacing and adding proper capitals and punctuation to their writing.
- Evaluation is an ongoing process that helps guide classroom instruction. Teachers continuously assess what children can do and build on their strengths.
- Emphasis is placed on learning, reading and writing strategies in meaningful contexts where children begin to gain awareness of the combination of contextual, pictorial and phonetic cues used as they read and write.
- A reading specialist works with the First Grade team to provide additional support for children who are in need of further help in developing reading and language arts skills.

Social Studies

First grade students engage in social studies curriculum content through project work. The chosen curriculum content reflects the various interests of the students and the teachers. Projects are ideal for integrated learning because they provide opportunities for children to immerse themselves in a wide variety of subject matter. Essential questions lay the foundation of the project work as these questions are used to engage students in a wide array of learning experiences as they work toward a common goal. It is through these experiences that students build on their existing schema to create new knowledge. Projects additionally allow for the integration of curriculum areas such as math, ELA, science, and art, thus exposing students to the real life application of these subjects as they relate to classroom projects.

Mathematics

At BB&N we believe that math should be joyful and engaging. Our program grows children's fluency with numbers and is rich in numbers-based experiences. We provide opportunities at every level for students to engage in mathematical explorations, to reason mathematically, and to express their ideas. We strive to strike a balance between larger conceptual understandings and specific skills and procedural fluency. We believe that all of our students can and will learn math.

The focus in first grade is addition and subtraction. Students use visual and physical models to develop a conceptual understanding of place value working towards efficient and appropriate strategies to solve problems. Students practice their skills through explorations using measurement tools including rulers and clocks.

First grade uses high quality, research-based resources including the *Bridges in Mathematics* curriculum. Classes are co-taught by the homeroom teacher and a math specialist using a hands-on approach in whole group investigations, small group activities, and individual practice.

In first grade students will:

- Add and subtract within 20 and become fluent with facts within 10
- Add and subtract multiples of 10
- Represent and solve addition and subtraction problems using equations
- Build and break apart two- and three-digit numbers by place value
- Tell time to the nearest half hour
- Measure and compare lengths using non-standard units
- Collect categorical data and make graphs
- Define attributes of regular shapes and partition shapes into fractional parts

Science

Students use a hands-on inquiry-based program to study science. This approach allows them to develop and use process skills in order to gain a body of scientific knowledge. During first grade, all topics and content relate to plant biology in service of their efforts to grow food for the BB&N and greater Community. Our highly integrated curriculum combines science, social studies, reading, writing and art to create a year-long study on community. Specifically, we focus on the following questions: What are our rights and responsibilities as community members? How are our values reflected in choices made by the community? How do individuals support collective needs? In experiencing and learning through these questions, first graders learn what part of our community is, including the natural world, how to be part of a community and how to act and do our part in making sure the community's needs are met. Connections are drawn between the different subject areas, and students are able to view all the topics through different perspectives, whether it be through the lens of a scientist, a writer, a cook, or a critical thinker.

Listed below are the units of study and highlights of the content and skills covered.

What is a scientist? Practice Observation and Experimentation Skills using Water

- Make hypotheses and set up experiments to determine how many paper clips can float on water. Understand that surface tension makes water sticky and easy to transport through plant roots and up the stem of a plant.
- Experiment with different paper types to see and observe what types of paper are more absorbent.

Science (continued)

- Experiment with celery or carnations to observe how capillary action moves the water through a stem and into a flower.

Habitats and Plants

- Make detailed observations on plants to understand each part of the plant and its function.
- Plant, germinate and care for produce in our tower gardens and garden beds.
- Record and make observations of the life cycles of various plants, while planting and working in our garden bed tower gardens.
- Make observations of the life cycle of a chick from the time eggs are in an incubator until the chicks are two weeks old.
- Observe different habitats in our local community to understand the basic needs of all living things.
- Discover how all parts of a habitats are connected and share knowledge of types of habitats with others in the community.

Light and colors

- Explore primary and secondary colors by mixing colored filtered light.
- Discover the properties of light by investigating reflection, refraction, and colors of light.
- Use the acquired knowledge of light and mirrors to understand an important requirement of plant growth.
- Investigate and explore how shadows are made and can move.

Scientific Measurements

- Measure common objects found in the science lab as well as parts of the plants to gain knowledge of centimeters.

Lower School World Languages

Our goal is to help students to build a foundation for future language learning and to be prepared to communicate as global citizens of an interconnected world. To do this, we want to highlight and embrace student identities and provide an environment where they are comfortable taking risks and applying a growth mindset to language learning.

The Lower School World Language Department uses an approach to teaching languages that focuses on proficiency and communication in an engaging and low stress environment. Teaching with comprehensible input prioritizes the delivery of understandable messages that are personalized, meaningful, interesting, and relevant to our students. The goal of our classes is for students to acquire Spanish or French through communication and active participation. When age appropriate, we aim to spend at least 90% of our classes in the target language focusing on listening and reading to provide input (as opposed to formal vocabulary and grammar instruction).

We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Lower School World Languages (continued)

Spanish

First Graders explore Spanish twice a week for 35 minutes. First Grade Spanish students continually work to build competency in the Spanish language through music, games, activities, stories, and small projects. To increase comprehension, vocabulary is introduced in context through a story and/song or game. The Spanish program takes into account that many first graders are building their foundations for reading in English first. First graders are introduced to basic reading skills through reading our daily lesson plan or reading some of the stories as a whole group. At the end of many of the stories, First Graders take a mini-book home to share with their families/caregivers.

The BB&N World Language Program from Beginners through Third Grade follows what is known as a spiral model, where students explore many of the same topics year after year but with different challenges at each grade level that build upon the skills learned in the previous years.

Music

First graders attend music class twice weekly, in both half and whole-class groups. Music activities center on the children's experience of music through singing, moving, listening, playing instruments, and creating melodies and rhythms. In addition, the first grade curriculum incorporates musical stories as focal points for engaged listening, expressive movement, original composition, and understanding musical form. The overall objective is for students to use a variety of tools to communicate music made by self and others.

Rhythm:

- Identify pulse as "Ta" and "TiTi"
- Differentiate between sound/silence
- Identify sound/silence as "rest"
- Analyze and describe rhythmic qualities in the music they hear and produce

Melody:

- Demonstrate melodic shape through movement, written symbols, and hand gestures
- Sing songs with a wide range of pitches
- Play pentatonic scales on glockenspiels
- Improvise and invent melodies on pitched instruments

Harmony:

- Develop proper mallet technique
- Demonstrate simple bordun (chord) on bar
- Experience ostinato

Form:

- Identify phrase
- Identify Introduction

Music (continued)

- Identify repeat sign
- Identify basic musical forms (ABA, Rondo, Variations, and Call-and-Response)

Timbre:

- Select appropriate timbres to accompany stories, songs, and poems
- Classify unpitched percussion (wood/metal/skin)
- Classify pitched percussion

Integrated Arts

The goal of first grade integrated arts is for learners to practice the work habits and dispositions of an artist. Our primary focus is on the habit of observation. Students are encouraged to notice shape, line, color, and texture in artworks, materials, books, and our environment. We develop a rich artistic vocabulary to help us get specific about what we see; we also “describe” what we see through observational drawing and sculpture.

We also emphasize material exploration and craftsmanship. First graders are invited to play with materials and notice how they behave and interact. They build fine motor skills as they experiment with new tools and develop a repertoire of artistic techniques. Learners also begin to practice strategies like iteration and critique to help them experiment, plan and improve over time.

Key Content:

- Scientific drawing & close looking
- Illustration & visual communication
- Painting & color mixing
- Collage & assemblage
- Ceramic hand-building techniques

Integrated arts acts as a platform for collaboration across disciplines. This collaboration helps students see the connectivity between subjects and the interconnectivity of our world. These interdisciplinary connections emerge over the course of our studies, as students explore key questions and ideas through art-making. Our final products will vary from year to year based on the questions and curiosities of our students.

Interdisciplinary Concepts We May Explore Include:

- Plant science & observation drawing
- Cultural traditions, family & identity
- An artist’s role in the community

Library

Students visit the library once a week as a class, where they listen to stories, select books to take home and begin to develop their library skills. The read aloud time provides an opportunity for students to:

Library (continued)

- Discover the joy of reading.
- Enrich their vocabulary and develop listening skills.
- Talk about the role of the author and the illustrator.
- Use picture clues to aid in understanding material.

When they sign out books, students are able to choose from a variety of titles and genres as well as learn the responsibility of borrowing and returning a book within a given period of time. As the year progresses, students will learn:

- How the library is arranged by categories.
- What types of books can be found in the library.
- To distinguish between fiction and non-fiction.
- To browse the library to find material of personal interest.

Parents are invited to visit the library and borrow books to read at home.

Technology

At the BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years. Through technological integration we give our students an introduction to word processing, spreadsheets and graphing, presentation software, three-dimensional design, internet safety and digital citizenship, online research, robotics, and programming. Our teachers create academic environments that facilitate student creativity, innovation, communication, and collaboration with others, while developing students into critical thinkers, problem solvers, and decision makers.

Physical Education

First grade students are challenged to react to directions and to try to achieve a specific movement pattern. Perceptual motor skills are progressively taught and practiced through repetition and correction. In the spring, the students create and design a music and movement assembly in their music and physical education classes.

- Movement Activities: Animal imitations, structured movement, shapes, acceleration and deceleration, transferring weight, bilateral, unilateral, and cross-lateral movement are introduced.
- Manipulative Skills: Students are exposed to and practice dribbling, kicking or passing an indoor soccer ball. Review of bouncing, rolling, throwing, catching, striking and shooting with different size balls.
- Locomotor Skills: Running, walking, jumping, hopping, leaping, skipping, galloping, and sliding are stressed and perfected.
- Non-Locomotor Skills: These skills are used in the warmup activities and gymnastics.
- Rhythmic Activities: Dance and move to music, hip-hop, as well as square and folk dancing, ball skills, jump rope and interpretative movements to music.

Physical Education (continued)

- Gymnastics: Mats are used for rolls, animal walks, balance stunts, and cartwheels. Cargo net, ropes, and rope ladder continue to be offered for upper body strength.
- Large Group Games: To develop team awareness, adherence to rules, team spirit, and cooperation. Relay, circle, or line formations are presented in each game. Tagging games are emphasized for fun as well as to develop aerobic fitness and running skills (stop, dodge, change of direction).
- Mindfulness: This practice helps to reduce stress, anxiety, and negative emotions, cool down when temper flares and sharpen concentration skills.

Responsive Classroom

Responsive Classroom is a school wide program to support the development in each individual of a core of important habits of mind that build the positive social emotional components for positive communication, character development, interpersonal relationships and responsibility to the broader school community. In the First Grade, we focus on the following skills:

- Develop an understanding of how class rules are created and why it is important to follow them.
- Practice and monitor self control during morning meeting and class meeting times.
- Speak assertively and respectfully in morning meetings.
- Learn the art of Sharing: from selecting items or topics, to narrowing the focus of what to say, to asking for questions, to thanking the class.
- Continue to improve behavior during transitions, free choice or unstructured time.
- Make wise, safe choices or seek support from adults as needed.

Homework

There is no formal, regularly assigned homework for children in B-K-1. Parents are expected to read aloud to their children for a minimum of 15 minutes every day.

Grade Two Teachers

		phone/voice mail
Homeroom* 2JK	Jenny Kramer	800-2459
Homeroom* 2K	Kristen Kosich	800-2426
Learning Specialist	Ryan Magnuson	800-2422
Reading Specialist	Rachel Stevens	800-2440
Mathematics	Bill Hritz	800-2410
Science	Carol Fine	800-2492
Library	Heather Lee	800-2462
Music	Sara Zur	800-2446
Physical Education	Carol Ann Loftus	800-2234
Spanish	Carolina Gomez-Kramer	800-2434
Technology	Maria Elena Derrien	800-2491
Integrated Arts	Ashley Bartlett	800-2430

*** Includes Language Arts, Mathematics and Social Studies instruction**

Email addresses for all Faculty and Staff at BB&N follow this format:
First InitialLast name@bbns.org

GRADE TWO CURRICULUM OVERVIEW

Language Arts

Second grade reading instruction focuses on phonics, fluency, expression, comprehension, and vocabulary development. Second grade writers work towards writing organized, thoughtful pieces strengthened by the revision and editing process. In addition, the Foundations program is used to support phonics, phonological/phonemic awareness and word study.

In Second Grade:

- Children respond to text through whole and small group discussions, writing activities, illustration and dramatization.
- Every day children read material of their choice at their reading levels.
- Teachers read aloud for pleasure, discussion and to expose students to a variety of authors and literary genres.
- Literature focuses on exploring plot, character, setting and theme through a wide variety of books and genres.
- Children experience many forms of writing, through science journals, teacher/child journals, factual social studies writing, short stories and contributions to class books.
- Literature is selected to provide a model for many writing projects, in which students recognize patterns of literature in their reading, then experiment with these patterns in their writing.
- Children participate in the writing process in which they plan, draft, edit, revise, and publish.
- Students review and are introduced to a variety of language and grammar skills including syllable types, parts of speech, plurals, capitalization, punctuation, compound words and prefixes.
- Children gain proficiency in decoding and encoding common sounds, blends and spellings.
- Spelling strategies and vocabulary are integrated through writing activities, with attention to words that appear frequently in children's writing.
- Children review letter formation.
- Evaluation and assessments occur regularly.

Academic Support Services

A reading/language arts specialist works with the second grade team to plan consistent, interconnected lessons and to provide additional support for children who are in need of further help in developing reading and language arts skills.

Social Studies

“Ourselves and Our Work”

Students will begin the year with an exploration of self-identity. Building on this knowledge, students will then expand their view to incorporate the world beyond themselves, studying how the communities of which they are a part (family, classroom, school, world) organize themselves around the concept of work.

Work affects our lives in many ways. Because of this, learning about how work shapes our world and our relationships to others is key to understanding our environment and aids us in our ability to see the world through another’s eyes. Understanding the perspectives of different workers helps us to think critically about social issues, media images, and our own role in society.

This year-long curricular study will help students look through the eyes of different groups of workers both from the present as well as the past. We will start with our students’ own notions and understandings about work and then expand beyond themselves to local, global, and historical examples.

Mathematics

At BB&N we believe that math should be joyful and engaging. Our program grows children’s fluency with numbers and is rich in numbers-based experiences. We provide opportunities at every level for students to engage in mathematical explorations, to reason mathematically, and to express their ideas. We strive to strike a balance between larger conceptual understandings and specific skills and procedural fluency. We believe that all of our students can and will learn math.

Second grade is about the extension and consolidation of addition, subtraction, and place value. Using the physical and visual models introduced in first grade, students solve more complex problems with bigger numbers with an emphasis on explaining and showing their thinking. The concept of multiplication is introduced through skip counting and equal grouping. Students continue their study of measurement working with standard units and refining their precision.

Second grade uses high quality, research-based resources including the *Bridges in Mathematics* curriculum. Classes are co-taught by the homeroom teacher and a math specialist using a hands-on approach in whole group investigations, small group activities, and individual practice.

In Second Grade students will:

- Add and subtract fluently within 20
- Build and break apart three- and four-digit numbers by place value
- Solve multi-step addition and subtraction problems
- Represent and solve addition and subtraction problems using equations
- Measure and estimate lengths with standard units
- Tell time to the nearest five minutes
- Represent a given amount using coins
- Count fluently from any starting number by 1s, 2s, 5s, and 10s
- Compose and decompose two dimensional shapes

[Gr. 2 p. 2 '23]

Science

Students use a hands-on inquiry-based program to study science. This approach allows them to develop and use process skills in order to gain a body of scientific knowledge. Listed below are the units of study and highlights of the content and skills covered:

Water and its Cycle

- Discover how many drops of water fit on a penny to appreciate the attractive nature of water.
- Design and conduct evaporation experiments.
- Observe a mini water cycle and become familiar with the terms evaporation, condensation, and precipitation.

Trees Through the Seasons

- Visit trees in Longfellow Park four times during the school year and observe their seasonal changes.

Bulbs

- Observe and measure the growth of paper white narcissus bulbs.

Magnets

- Test various classroom items to discover which materials are magnetic.
- Use bar magnets to discover the forces of attraction and repulsion.
- Discover which is stronger, the poles or the middle of the magnet.
- Make compasses using a magnet, piece of cork, pin and a bucket of water.
- Build a maglev train out of a piece of Styrofoam and magnets that float over a magnetic train track

Snow and Ice

- Use a Celsius thermometer.
- Study the effect of salt on the melting point of ice.
- Apply the above information to make ice cream.

Insects

- Observe the life cycle of painted lady and monarch butterflies.
- Learn about the physical characteristics of insects.

Eggs and Chicks

- Study the development of chicks from fertilized eggs.
- Observe chicks during the first week and one-half of life.

Lower School World Languages

Our goal is to help students to build a foundation for future language learning and to be prepared to communicate as global citizens of an interconnected world. To do this, we want to highlight and embrace student identities and provide an environment where they are comfortable taking risks and applying a growth mindset to language learning.

Lower School World Languages (continued)

The Lower School World Language Department uses an approach to teaching languages that focuses on proficiency and communication in an engaging and low stress environment. Teaching with comprehensible input prioritizes the delivery of understandable messages that are personalized, meaningful, interesting and relevant to our students. The goal of our classes is for students to acquire Spanish or French through communication and active participation. When age appropriate, we aim to spend at least 90% of our classes in the target language focusing on listening and reading to provide input (as opposed to formal vocabulary and grammar instruction).

We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Spanish

Second Graders explore Spanish twice a week for 45 minutes. The class is divided in half groups, which allows for active participation in class. Second Graders continue to build upon the program from first grade and students are encouraged to communicate in Spanish as much as possible, but it is not a requirement since our program acknowledges that students acquire new languages at different levels/rates. The teacher doesn't focus on error correction at this level since making mistakes is an essential part of acquiring a language. However, the teacher does model the correct use of the language without focusing explicitly on grammar.

Much of our work is story-based, utilizing both student- and teacher-created content that targets high frequency structures and words that are personalized, compelling, and repetitive by design. Classwork is focused around these stories and is varied, including combinations of reading, writing, acting games, movement, story listening, and drawing in order to increase students' exposure to and use of the Spanish language. Students also spend time every class discussing the date, the weather, personal interests, and daily activities. Second Graders engage and write and discuss exercises based on stories done in class. These activities are kept in the notebook that they will continue using in third grade.

The BB&N World Language Program from Beginners through Third Grade follows what is known as a spiral model, where students explore many of the same topics year after year but with different challenges at each grade level that build upon the skills learned in the previous years.

Music

Second graders attend music class twice weekly, in both half and whole-class groups. Music activities center on the children's experience of music through singing, moving, listening, and playing instruments. Second graders become more familiar with the composition process, and work on a variety of group projects to interpret and create their own sound pieces. The overall objective is for students to use a variety of tools to communicate music made by self and others.

Rhythm:

- Demonstrate and label half note, whole note, quarter and eighth notes as well as rests

Music (continued)

- Recognize time signature (2, 3, 4)
- Experience body percussion

Melody:

- Demonstrate contour
- Demonstrate proper vocal technique
- Improvise and compose original melodies on pitched instruments
- Read and write B-A-G melodies on the recorder

Harmony:

- Develop proper mallet technique
- Demonstrate ostinato and simple bordun chords
- Experience major/minor
- Sing songs in round form

Form:

- Demonstrate phrase
- Identify Coda, repeats, ABC, Rondo, Variations, and Call-and-Response
- Identify bar line/double bar/measure

Timbre:

- Identify instrument families in the orchestra
- Become familiar with a diverse range of instruments from around the world
- Work in groups to create original compositions that blend sound, rhythm, and style in relation to specific contextual frameworks

Integrated Arts

The goal of integrated arts in second grade is to help students develop an appreciation of different materials and to begin thinking, seeing and working both two-dimensionally and three-dimensionally. Students will explore big ideas about imagination, identity, living in a community and connections between children across the world.

Students will develop skill in:

- Developing a creative approach to design by generating many visual images for each project.
- Problem solving simple functional design challenges.
- Engaging in the artistic process of following a visual image from an idea to a working drawing, getting feedback and creating a finished project.
- Basic woodworking hand tool safely.

Essential Questions We Explore Include:

- What role does artwork play in a culture?
- How do artists tell stories through their work?
- How do artists make a difference in their world?
- How do artists advocate for what they believe in?

Key Content:

- Elements of Art

Integrated Arts (continued)

- Color mixing with primary and warm and cool color families
- Three dimensional design and engineering
- Symbolism in simple imagery and icons
- Self portraiture from observation
- Empathy for others in communities near and far

Integrated Arts acts as a platform for collaboration across disciplines. This collaboration helps students see the connectivity between subjects and the interconnectivity of our world. These interdisciplinary connections emerge over the course of our studies, as students explore key questions and ideas through art-making. Our final products will vary from year to year based on the questions and curiosities of our students.

Information Science/Library

Students visit the library for information science, book selection, storytelling, and book talks.

Topics covered include:

- Locating fiction and picture books by using the visual online catalog.
- Locating nonfiction by using a given Dewey call number.
- Practice locating fiction by author's last name.
- Checking out books independently.
- Evaluating a book for ease or difficulty.
- Using an encyclopedia (book and online).
- Using a table of contents and index to locate material in a book.
- Sharing thoughts and opinions about books and recommending to others.
- Using the school library website.
- Using a teacher selected website.

Technology

At the BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years. Through technological integration we give our students an introduction to word processing, spreadsheets and graphing, presentation software, three-dimensional design, internet safety and digital citizenship, online research, robotics, and programming. Our teachers create academic environments that facilitate student creativity, innovation, communication, and collaboration with others, while developing students into critical thinkers, problem solvers, and decision makers.

Physical Education

In the second grade, students begin to concentrate on developing specific sports skills used in team and individual sports. Group participation, individual effort, and doing one's best are emphasized throughout the year.

- Movement exploration: Learn how the body moves through animal imitations, moving to music, imitating sports movements, and moving while changing shape, level, direction, force, and time.
- Manipulative skills: Develop hand eye coordination by tossing, throwing, and catching a variety of balls (bean bags, yarn balls, playground balls, soft baseballs, and wiffle balls).
- Locomotor skills: There is increased concentration on skipping, galloping, and sliding. Jumping and hopping are also increased as the students use the long and short jump ropes and hula hoops to perform specific movement patterns. Kicking, passing, shooting and dribbling a soccer ball are covered. Goal tending skills including punting are introduced.
- Non-Locomotor skills: Continue throughout the gymnastics unit.
- Rhythmic activities: Square dancing, aerobics, exercise to music, and creative movement to various music styles are covered.
- Gymnastics: Tumbling on the mats includes forward and backward rolls, cartwheels, balance stunts, and animal walks. Work continues on the high and low beams, vault, ropes, and cargo net.
- Group games: Active participation in large group games is encouraged. Following directions, playing by the rules, working towards a specified objective, and performing movement skills to achieve the objective are stressed.
- Team sports: Lead up games: soccer, basketball, kickball (as a lead-up to T-ball), T-ball, and wiffle ball are played, newcomb lead up to volleyball, and pilo polo lead up to floor hockey. Skills/concepts taught followed by their use in lead-up games.
- Mindfulness: This practice helps to reduce stress, anxiety, and negative emotions, cool down when temper flares, and sharpen concentration skills.

Responsive Classroom

Responsive Classroom is a school wide program that promotes character development, interpersonal relationships and responsibility to the broader school community. In Second Grade, we focus on the following skills.

- Become a more active participant in morning meeting, supporting others' turn to speak and speaking assertively and respectfully in morning meetings.
- Show caring and concern for peers through words and actions. Develop an understanding of how to create class rules and why community members try to follow rules that are set.
- Continue to work on making positive academic and social decisions.
- Be inclusive and flexible.
- Practice positive self-control.

Homework

Children will read at least 15-20 minutes a night. Teachers may also provide optional, supplemental resources.

[Gr. 2 p. 8 '23]

Grade Three Teachers

		phone/voice mail
Homeroom* 3E	Sylvia Elmer	800-2468
Homeroom* 3Z	Amena Zavery	800-2457
Learning Specialist	Ryan Magnuson	800-2422
Academic Support Specialist	Sarah Ngo	800-2544
Mathematics	Alexander Walker	800-2417
Science	Carol Fine	800-2492
Spanish	Carolina Gomez-Kramer	800-2434
Information Science	Heather Lee	800-2462
Music	Jenna Havelin	800-2481
Integrated Arts	Ashley Bartlett	800-2430
Technology	Maria Elena Derrien	800-2491
Physical Education	Carol Ann Loftus	800-2234

*** Includes Language Arts, Mathematics and Social Studies instruction**

Email addresses for all Faculty and Staff at BB&N follow this format:
First InitialLastName@bbns.org

GRADE THREE CURRICULUM OVERVIEW

Language Arts

The language arts program equips students to develop reading and writing skills as they use a variety of text sources to inform their learning. In third grade, students:

- Gain exposure to a broad selection of literature, including biographies, novels, and informational texts
- Practice inferential thinking
- Read books of their own choosing during Reading Workshop and Academic Choice Time
- Sharpen oral reading skills by building fluency and reading aloud with expression
- Participate in the writing process by prewriting (e.g. generating ideas, planning, researching topics, organizing ideas), drafting (e.g. revising, editing, and conferring), and publishing narrative and expository pieces
- Participate in literature circles designed to promote dialogue about books through the sharing of summaries, predictions, text connections, and visualizations
- Learn to identify main ideas and supporting details
- Use graphic organizers to improve comprehension and written organization
- Learn to consistently apply spelling and grammar conventions
- Learn to spell and read grade-appropriate high frequency words
- Write responses to literature and social studies texts
- Learn lowercase and uppercase cursive and begin touch-typing

Evaluation and informal assessments occur regularly, while standardized assessments occur several times a year. Academic support specialists work with the third grade team to plan consistent, interconnected lessons and to provide additional support for children who need to further develop their language arts skills.

Social Studies

Third graders explore three primary social studies topics over the course of the school year.

The Characteristics of Leadership

Students learn about a variety of influential world leaders – including Sonia Sotomayor, Harvey Milk, and Wangari Maathai – through shared reading experiences and discussions. After reflecting on the biographies read, students consider what qualities effective leaders possess and begin to cultivate those qualities in their own lives. Students also assume leadership roles on campus as they organize the annual Cradles to Crayons clothing drive and enjoy having Beginner buddies during Community Time. Team-building activities, grade-wide conversations, and an interdisciplinary culminating project round out the unit.

Understanding Differences

Students learn about a variety of physical and developmental disabilities, including blindness, limb loss, Down syndrome, and communication disorders. Visitors from Canine Companions for Independence, Perkins School for the Blind, Helping Hands, and Changing Perspectives

Social Studies (continued)

provide students with opportunities to ask thoughtful questions and learn about the experiences of those living with neurological and physical challenges. Children also consider the benefits of assistive technology and accessible architecture during a variety of project-based explorations.

Modern and Ancient Egypt

Students explore the region of the Middle East before turning their attention more specifically to Egypt. By making connections and seeking points of commonality, students reflect on how life in Modern Egypt may be similar to life in the United States as well as how it might be different. Third graders connect directly with students from Cairo American College through web-based communication in order to learn more about life in the capital city. The unit continues with a focus on the Ancient Egyptian theme of “Art as Magic.” Students participate in a number of interactive and hands-on projects designed to bring their learning to life. The unit includes active reading exercises connected to ancient myths and informational texts. Students showcase comprehensive term-end research projects during a gallery exhibit for families and classmates.

Mathematics

At BB&N we believe that math should be joyful and engaging. Our program grows children’s fluency with numbers and is rich in numbers-based experiences. We provide opportunities at every level for students to engage in mathematical explorations, to reason mathematically, and to express their ideas. We strive to strike a balance between larger conceptual understandings and specific skills and procedural fluency. We believe that all of our students can and will learn math.

Third grade formally introduces multiplication and division. Students consolidate their understanding of addition and subtraction algorithms. Using both new and familiar models such as number lines, arrays, and ratio tables students develop a deep understanding of the concept of equal groups and equal sharing. Students are expected to learn multiplication combinations through 10×10 and to apply their understanding of place value to develop strategies for multiplying multi-digit numbers. Third graders build the foundation of fractions by exploring them in contexts such as time, money, and length.

Third grade uses high quality, research based resources including the *Bridges in Mathematics* curriculum. Classes are co-taught by the homeroom teacher and a math specialist using a hands on approach in whole group investigations, small group activities, and individual practice. Beginning in third grade students are given math homework twice a week.

In third grade students will:

- Add and subtract numbers with regrouping
- Add numbers with regrouping using the standard algorithm
- Fluently multiply to 10×10

Mathematics (continued)

- Multiply by multiples of 10 and 100
- Know related division facts
- Represent and solve addition, subtraction, and multiplication problems using equations
- Solve problems using addition, subtraction, and multiplication
- Solve whole number area and perimeter problems
- Demonstrate an understanding of fractions as numbers
- Define and classify polygons
- Solve problems with elapsed time and tell time to the nearest minute

Science

Students use a hands-on inquiry based program to study science. This approach allows them to develop and use process skills in order to gain a body of scientific knowledge. Listed below are the units of study and highlights of the content and skills covered.

Electricity

- Discovering a variety of ways to light one bulb using one wire and one battery
- Using bulb and battery holders to create circuits with multiple batteries and bulbs
- Comparing parallel circuits with series circuits
- Testing classroom items to discover which are insulators and which are conductors
- Creating a conductive design using cooper wire tape and a LED
- Creating quiz boards; game boards that light up when you connect the question to the correct answer

Geology

- Observing rocks and minerals using a hand lens, streak plates and balances
- Learning about how rocks are formed and becoming familiar with the terms igneous, sedimentary and metamorphic
- Discussing and exploring how the earth changes through processes such as erosion and volcanoes
- Making fossils and learning how they provide information about plants and animals that lived long ago

Eyes

- Learning about the parts of the eye and how the eye and brain work together to allow sight
- Exploring optical illusions and the benefits of binocular vision

The Mysterious Powder

- Examining and comparing four white powders
- Observing and describing the reactions of the powders with water, vinegar, iodine and red cabbage juice

Science (continued)

- Applying the above information to solve a mystery involving a white powder found on the school yard of a fictitious school

Science and Egypt

- Investigating methods to mummify an apple
- Building a “reed boat” out of straws, rubber bands and clay, and then testing the boat on the “Nile” to see how much cargo it holds
- Using a sundial to learn how a shadow changes over the course of the day
- Observing the moon and learning about the phases of the moon
- Making Big Dipper Finders and learning about how constellations change location in the sky during the night

Lower School World Languages

Our goal is to help students to build a foundation for future language learning and to be prepared to communicate as global citizens of an interconnected world. To do this, we want to highlight and embrace student identities and provide an environment where they are comfortable taking risks and applying a growth mindset to language learning.

The Lower School World Language Department uses an approach to teaching languages that focuses on proficiency and communication in an engaging and low stress environment. Teaching with comprehensible input prioritizes the delivery of understandable messages that are personalized, meaningful, interesting and relevant to our students. The goal of our classes is for students to acquire Spanish or French through communication and active participation. When age appropriate, we aim to spend at least 90% of our classes in the target language focusing on listening and reading to provide input (as opposed to formal vocabulary and grammar instruction).

We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Spanish

Third Graders explore Spanish twice a week for 45 minutes. Third Grade Spanish students continue to build basic competency in the Spanish language through games, activities, projects, reading and writing. Students are expected to try to use the target language as much as possible, this goes from using a single word to memorizing sentences or creating their own. They are always encouraged to use the target language to communicate, and the teacher doesn't focus on error correction at this level since making mistakes is an essential part of acquiring a language. However, the teacher does model the correct use of the language without focusing explicitly on grammar.

Lower School World Languages (continued)

Much of our work is story-based, utilizing both student- and teacher-created content that targets high frequency structures and words that are personalized, compelling, and repetitive by design. Classwork is focused around these stories and is varied, including combinations of reading, writing, acting, games, movement, story listening, and drawing in order to increase their exposure to and use of the Spanish language. Students also spend time every class discussing the date, the weather, personal interests, and daily activities. Third Graders continue engaging in writing and discussing exercises based on stories done in class.

The BB&N World Language Program from Beginners through Third Grade follows what is known as a spiral model, where students explore many of the same topics year after year but with different challenges at each grade level that build upon the skills learned in the previous years.

Information Science/Library

Third graders come to library once a week in half groups to choose books for stories, and for Information Science, where they work on developing research and critical thinking skills using both online sources and print materials. During the course of the year students learn how to:

- Use the online library catalog to find books
- Practice using call numbers to locate books on the library shelves
- Explore and use appropriate research materials such as World Book online
- Use National Geographic Places and Animals online to support Social Studies work
- Create “Book Adds” for their favorite books, using pictures they print or paper and crayons to share and display their comments
- Locate and explore biographies as part of a whole class project
- Understand differences between fact and opinion
- Begin to understand the organization of materials in libraries using Dewey

Technology

At the BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years. Through technological integration we give our students an introduction to word processing, spreadsheets and graphing, presentation software, three-dimensional design, internet safety and digital citizenship, online research, robotics, and programming. Our teachers create academic environments that facilitate student creativity, innovation, communication, and collaboration with others, while developing students into critical thinkers, problem solvers, and decision makers.

Music

Curriculum Statement: Third grade students will engage in practicing, performing, improvising, and creating music using the recorder and other barred Orff and percussion instruments. All concepts listed below will be explored through a diverse repertoire of songs from various music genres. Students will engage in listening exercises to expand their knowledge of different styles of music and will also explore the historical background and contextual aspects of the repertoire.

- Rhythm
 - Demonstrate pulse in different meters
 - Read, write, and identify:
 - Time signatures: 2/4, 3/4, 4/4, 6/8, common-time, and cut-time
 - Quarter, eighth, half, dotted half, whole notes and rests
 - Transition from second grade method to count-based rhythmic reading
- Pitch
 - Read, write, and identify treble clef notes
 - Read, practice, and perform notes on the recorder using proper technique
 - GAB, high CD, low DEF (optional: C, F#, high E)
- Melody and Harmony
 - Identify treble clef notes and the major scale utilizing solfege
 - Identify, create, and improvise melodic patterns
 - Learn basic harmonies and instrumental accompaniments
 - Demonstrate artistic melodic phrasing on voice and various classroom instruments utilizing proper technique
- Form and Composition
 - Identify, recognize, and create various musical forms: sonata, rondo, themes and variation, chorus and verse, call and response, round/canon, ostinato
 - Compose and improvise multi-instrumental arrangements
- Articulation
 - Identify music markings: i.e., repeat, D.C./D.S. al fine/al coda, fermata
 - Identify and perform music with various styles of articulation: i.e., legato, slurs, staccato, accents
- Dynamics
 - Identify, recognize, and perform various musical dynamics
 - forte, piano, fortissimo, pianissimo, mezzo forte/piano
 - crescendo, decrescendo, ritardando
- Tempo
 - Identify, recognize, and perform various musical tempi
 - Allegro, andante, adagio, moderato, lento
 - Accelerando, diminuendo
- Timbre
 - Watch, listen to, discuss, and identify musical instruments using the Western European Classical model (brass, woodwind, percussion, and strings) and the [Hornbostel-Sachs](#) classification system

Integrated Arts

The goal of integrated arts in third grade is to explore big ideas about leadership, identity, culture, differences, community and advocacy through investigating art and art materials. Students will develop skill in sketching, observational drawing, handbuilding and sculpting in clay, building and developing competency in woodworking hand tools, painting with watercolor and tempera, creating dynamic design and drafting comics.

Essential Questions We Explore Include:

- What role does artwork play in a culture?
- How do artists tell stories through their work?
- How do artists make a difference in their world?
- How do artists advocate for what they believe in?

Key Content:

- Pattern and mark making
- Additive and Subtractive Ceramic Sculpture
- Box Making
- Portraiture and Figure Drawing from Observation
- Illustration
- Graphic Design
- Additive and Subtractive Wooden Sculpture

Integrated arts acts as a platform for collaboration across disciplines. This collaboration helps students see the connectivity between subjects and the interconnectivity of our world. These interdisciplinary connections emerge over the course of our studies, as students explore key questions and ideas through art-making. Our final products will vary from year to year based on the questions and curiosities of our students.

Physical Education

Third grade has a more serious approach to the development and application of the various team sports skills. Competition is introduced and taught with a positive approach which emphasizes team effort, cooperation, and participation. Students gain skill development through drills and repetition followed by the application in games.

Team Sports:

- Soccer: Soccer is taught in the fall when basic skills are taught, used in lead-up games, and then applied in small group games. Dribbling, passing, goal-tending scoring, offense and defense strategies are taught.
- Kickball: Base running, pitching, fielding, catching, throwing, positions, and rules are introduced to the class.
- Football: Passing, catching, punting, and running with a football are covered.
- Basketball: Dribbling, passing, catching, shooting, and offensive/defensive positions are experienced.
- Volleyball: Setting, bumping, serving and rotation are taught.

Physical Education (continued)

- Group games: Developing awareness for rules and strategies of various fun games, stressing participation and sportsmanship. Coordination, flexibility, agility, balance, and fitness are improved through these games.
- Floor hockey: Dribbling, passing, shooting and goal tending skills are introduced and applied in lead-up games.
- Rhythmic Activities: Hip-hop, folk dancing, warm-up exercises to music.
- Track and Field: Introduction of running and field events. Track events include dash, team relay, hurdles and long distance run. Field events include modified shot put, discus, javelin, standing and running long jump.
- T-ball/Wiffle ball: Basic fielding skills, hitting skills and rules are taught in preparation for softball in following years.
- Relaxation/Belly Breathing/Mindfulness Activities: In many of our classes, we incorporate quiet, mindful activities as a way to relax and concentrate on our breathing

The Responsive Classroom

The Lower School uses the social curricular practices of *The Responsive Classroom*. Third graders learn to speak clearly and respectfully during Morning Meeting and class discussions. They also learn to focus on the discussion topic and to contribute positively and consistently. Students begin to assume greater responsibility for managing time wisely, setting personal limits, and following limits set by teachers. All children work towards developing greater self-control and using kind, affirming words in both academic and social situations. Students also practice including peers in group games as well as accepting losses or setbacks with resilience.

Homework

- Third grade homework progresses logically and incrementally over the course of the year.
- Reading homework consists of 20 minutes of independent active reading and recording.
- Language Arts homework consists of one double-sided grammar practice page on Mondays and Wednesdays.
- Math homework consists of one double-sided practice page on Tuesdays and Thursdays.
- Spelling homework consists of a rule-based list of twelve words to review throughout the week in preparation for a dictation at the end of the week.

Grade Four Teachers

		phone/voice mail
Homeroom* 4DR	Christina DelloRusso	800-2425
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Integrated Arts	Emily Discenza	800-2479
Physical Education	Ed Bourget	800-2437

*** Includes Language Arts, Mathematics and Social Studies instruction**

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GRADE FOUR CURRICULUM OVERVIEW

Language Arts

Language Arts activities and lessons are taught daily and focus on developing skills in the areas of listening, speaking, reading and writing. Lessons are often integrated with other curricular areas. In fourth grade:

- Reading instruction focuses on comprehension and analysis of a variety of fiction and non-fiction texts.
- Read alouds and independent reading occurs on a regular basis in class, and children are expected to read at home daily.
- Children participate in literature circles to build meta-cognitive skills and practice peer discussions.
- Students develop the process of writing, which includes drafting, conferencing with peers or teachers, improvements through revising and editing.
- Students also use pre-writing strategies such as graphic organizers to plan their writing on some assignments.
- Grammar and mechanics are taught as group lessons and may be reviewed individually during teacher or peer conferences.
- Students experiment with writing various genres
- Spelling rules and patterns are reviewed and taught. Additional spelling words and vocabulary come from reading material and word frequency lists.
- Handwriting instruction builds fluency in cursive and extends usage with the goal of using cursive for some assignments.
- Formal and informal assessments and evaluations occur throughout the year.
- Reading specialists work with the homeroom teachers to plan consistent, interconnected lessons and to provide additional support for children who are in need of further help in developing language arts skills.

Social Studies

The social studies curriculum aligns with the science program, and begins with an in-depth study on electricity and different forms of renewable energies. Through readings, cooperative projects, research and discussion, students develop and practice skills while becoming more aware of environmental issues. Students examine their relationship with nature, and explore the ideas of conservation and stewardship. Students also investigate the natural resources that exist across the fifty states and abroad.

Students learn valuable research skills as they explore four sources of renewable energy (fuel cell, wind, solar, and hydro), and interact with experts both on and off campus to further their understanding of how these energy sources work. Students use various platforms to educate others on sustainability, and the importance of renewable energies for the future of the planet. Through exhibits and publications, students develop their communication and presentation skills.

In the later part of the year, the curriculum shifts to focus on how change is created through systems of government, and how, in a democracy, people can bring about

Social Studies (continued)

change through advocacy. Students look at the American Constitution and the structure of government, examining the roles of the different leaders, and are able to describe the responsibilities of government at the federal, state, and local levels. The students address the larger question of what it means to be an American, and look at different systems of government around the world.

Mathematics

At BB&N we believe that math should be joyful and engaging. Our program grows children's fluency with numbers and is rich in numbers-based experiences. We provide opportunities at every level for students to engage in mathematical explorations, to reason mathematically, and to express their ideas. We strive to strike a balance between larger conceptual understandings and specific skills and procedural fluency. We believe that all of our students can and will learn math.

Fourth graders solidify the foundation of whole number operations, building their proficiency with multiplication and division. Students extend their knowledge of the number system to both larger whole numbers (millions and beyond) and with decimals. In fourth grade students build a conceptual understanding of fractions with simple operations and applications. Angles in triangles are used to extend the students' ability to classify shapes.

Fourth grade uses high quality, research-based resources including the *Bridges in Mathematics* curriculum. Classes are co-taught by the homeroom teacher and a math specialist with an interactive approach in whole group investigations, small group activities, and individual practice. Students continue having math homework a few times a week.

In fourth grade students will:

- Work with the number system in whole numbers and decimals
- Estimate using a variety of approaches including rounding numbers
- Fluently recall multiplication combinations to 12x12 and related division facts
- Find factor pairs for a number and find common multiples
- Multiply multi-digit numbers
- Divide whole numbers with a single digit divisor with and without remainders
- Find equivalent fractions, compare and order fractions
- Add and subtract fractions with common denominators
- Read, write, and order decimals
- Classify regular and irregular polygons using attributes such as angles and lines
- Use efficient strategies to model and solve multi-operation problems
- Represent problems using equations

Science

The fourth grade curriculum emphasizes exploration, collaboration, and innovation. Our highly integrated curriculum combines science, social studies, reading, writing and art to create a year long study on sustainability, in particular, sustainable cities. Connections are drawn between the different subject areas, and students are able to view all these topics through different perspectives, whether it be through the lens of a scientist, a poet, or a critical thinker. Woven throughout the curriculum are discussions on values, respect, and the responsibility our students have as members of our community, and of the world. The curriculum is aligned with BB&N's Global Competencies Framework and highlights many of the UN Sustainability Goals. In doing so, the curriculum allows fourth graders to develop a global mindedness that can carry them beyond our classroom as they become lifelong learners and effective activists for change.

Below are some highlights of the topics and skills that fourth graders employ.

Practicing Observation, Experimentation Skills and Communication

- Investigate the properties of a lens while observing common household items.
- Learn the parts of a microscope and its correct use.
- Use the microscope to observe a natural object and create a detailed scientific drawing.

Mapping

- Communicate effectively to direct someone to an unknown location on campus using a map.
- Create a map to direct someone to the Middle School or Upper School campus.
- Explore and understand the maps of Cambridge and Boston.
- Create a map of Cambridge and Boston in the past and present day.

Fossil Fuels, Alternative Energy Sources and the Environment

- Acquire note taking and research skills to understand Energy.
- Plan and design electric generators that can power an LED bulb using copper wire, cardboard and magnets.
- Discuss common environmental and relevant environmental problems occurring in the world.
- Compare and contrast different means of producing electricity from fossil fuel burning to clean technologies.
- Investigate solar, wind, and hydropower technologies while assembling science kits.
- Recommend sources of energy that will be the most effective and sustainable during the planning and designing of a sustainable city of the future.

Astronomy – Navigation and Colonization

- Explore how humans have navigated using the stars.
- Research the solar system to understand which planets could be habitable in the future and why.
- Design a sustainable human colony on another planet (if time allows).

Lower School World Languages

Our goal is to help students to build a foundation for future language learning and to be prepared to communicate as global citizens of an interconnected world. To do this, we want to highlight and embrace student identities and provide an environment where they are comfortable taking risks and applying a growth mindset to language learning.

The Lower School World Language Department uses an approach to teaching languages that focuses on proficiency and communication in an engaging and low stress environment. Teaching with comprehensible input prioritizes the delivery of understandable messages that are personalized, meaningful, interesting and relevant to our students. The goal of our classes is for students to acquire Spanish or French through communication and active participation. When age appropriate, we aim to spend at least 90% of our classes in the target language focusing on listening and reading to provide input (as opposed to formal vocabulary and grammar instruction).

We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Fourth graders explore Spanish or French twice a week for 45 minutes each time. Spanish students continue to build upon their foundational skills from B-3 while French students are beginning the language for the first time. In both languages, speaking/listening warm-ups, daily routines and closing activities create predictable structure to support confidence and practice content learned in class. Students are expected to speak the target language in class and are supported and encouraged to do so with a variety of strategies. Class content strives to be engaging, focused on high-frequency words, and connected to meaningful content for the student. Repetition and spiral techniques allow students to begin to build proficiency and overall comfort in the language. Typical classroom activities include songs, reading, story listening, drawing, writing, short video clips, projects, role playing, and games.

Information Science/Library

Fourth grade students visit the library once a week in half groups for book selection, book talks, search skills and stories. Topics covered include:

- Practice using sites like FEMAkids, NASAkids, Google Earth, World Book Student Online and World Atlas online to find information.
- Using the school library catalog to locate books by author, title, keyword and subject.
- Using and comparing print nonfiction and electronic materials such as National Geographic Kids and articles they find using 'Kiddle'.
- Using websites posted on the school library homepage to explore different kinds of information.

Information Science/Library (continued)

- Practice choosing appropriate sources to gain confidence with using different reference tools.
- Discussing literature in small and whole group settings; using terms of character, setting, plot, themes and point of view, as well as personal response.
- Writing short book reviews to post on the school library website.

Technology

At the BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years.

Coding:

In the technology lab students are taught coding using the Scratch programming language. In a safe and inclusive lab setting students are given the freedom to create and work on projects that are engaging to them. They are free to work autonomously or (when appropriate) they can collaborate on projects.

Responding to students' individual learning style, lab learning goals are set (as needed) that allow students to work at their own pace. Engaging project ideas and observational learning are used to deliver a rigorous learning experience for the students.

Robotics:

Students are presented with engaging open-ended real-world problems. They work in teams to develop solutions. Students **begin** to formally learn about critical thinking and apply it to lab challenges. Students take turns playing a leadership role as they build knowledge and develop ideas thru research and observation.

Students continue to:

- Develop their executive function skills
- Define their own personal learning goals
- Develop the skills required to collaborate on joint project
- Develop their communications skills by sharing project ideas and expressing them non-verbally (storyboarding)

Music

Curriculum Statement: Fourth grade students will engage in practicing, performing, improvising, and creating music using their voice, various types of drums, and other percussion instruments. All concepts listed below will be explored through a diverse

Music (continued)

repertoire of songs while highlighting various indigenous and oral tradition based music genres. Students will engage in listening exercises to expand their knowledge of different styles of music and will also explore the historical background and contextual aspects of the repertoire.

Key Musical Concepts:

- Rhythm
 - Explore rhythmic concepts of: syncopation, polyrhythm, ostinato, call and response, and improvisation
 - Listen to, perform, and identify time signatures and rhythms building on concepts covered in grade 3.
 - Time signatures: 12/8
 - Sixteenth notes, eighth and sixteenth note variations

Melody and Harmony

- Utilize solfege to identify treble clef notes, major/minor/major pentatonic scales
- Learn 2- or 3-part split vocal pieces and multi-instrumental accompaniments
- Demonstrate artistic melodic phrasing on voice and various classrooms instruments utilizing proper technique
- Identify and read treble clef keys and melodic passages using solfege
- Learn various songs

Form and Composition

- Listen to, identify, learn, and perform multi-part vocal and instrumental pieces
- Compose and improvise multi-instrumental arrangements

Articulation, Dynamics, and Tempo

- Continue work from grade 3 to identify proper forms of musical articulation, dynamics, and tempo as appropriate to the musical literature explored
- Students will focus on deep listening skills, rote instruction, intuiting the music, and the improvisatory aspects of the genres explored.
- Timbre
 - Watch, listen to, discuss, and identify musical instruments using the Western European Classical model (brass, woodwind, percussion, and strings) and the [Hornbostel-Sachs](#) classification system.

Integrated Arts

The goal of fourth grade art is for learners to gain exposure to a wide variety of artistic ideas. Through exploring cultural traditions, art history, and contemporary art, students come to understand that there are many ways to be an artist. Children investigate various materials, techniques, approaches, and styles. They have opportunities to reflect on the subject matter, ideas and aesthetics that excite them, and consider ways they hope to grow as makers and artists. They are also given time and space to play and experiment to discover new methods of their own. In short, students are encouraged to have an open, creative mind.

Integrated Arts (continued)

Fourth graders also begin to take greater ownership over our studio and its material resources. They learn to use tools and materials safely, and they are expected to play an active role in organizing and maintaining our space. As the school year progresses, they gradually gain access to a wider variety of choices which they can access independently.

Key Content:

- Drawing, Painting & Printmaking
- Ceramics & wire sculpture
- Fiber Arts
- Abstraction
- Installation Art & Environmental Art
- Architecture, Public Art & Street Art

Integrated arts acts as a platform for collaboration across disciplines. This collaboration helps students see the connectivity between subjects and the interconnectivity of our world. These interdisciplinary connections emerge over the course of our studies, as students explore key questions and ideas through art-making. Our final products will vary from year to year based on the questions and curiosities of our students.

Interdisciplinary Concepts We May Explore Include:

- Mapping & geography
- Natural resources & power
- Architecture & the built environment across cultures & throughout history
- Sustainability & future cities

Physical Education

The fourth grade physical education curriculum will focus on the introduction of team sports, individual skill development, and mindfulness with a focus on relaxation breathing that will help students to prepare themselves for a healthy lifestyle. The goal of the fourth grade program is to properly prepare the students to not only play team sports, but to understand the concepts of each sport. The individual student will be introduced to new terminology such as cardiovascular, aerobic, and anaerobic activity. The students will also focus on individual physical fitness, while working on the individual skill development of each student needed for team sports. The fourth grade curriculum will use assessments based on individual skill growth for each unit. Sportsmanship and teamwork will be the cornerstone of each unit.

Fall

- Physical Fitness: Concepts and components of fitness are covered throughout the year through various activities and exercises that can help to improve fitness level.
- Soccer: Develop skills, strategies, and knowledge of the rules.

Physical Education (continued)

- Football: Review of throwing, catching and kicking skills.
- Kickball: Develop throwing, catching and kicking skills.

Winter

- Basketball: Develop basic skills, learn rules, positions and strategies.
- Volleyball: Review the skills of the bump, set, serve and positional play.
- Floor Hockey: Review of skills and used in lead-up and full court games.
- Fitness and Yoga: Introduce students to yoga stretching and fun fitness exercises.
- Gymnastics: Practice and review tumbling skills, routines on the balance beam and mats, as well as climbing activities to increase upper body strength.

Spring

- Frisbee: Concentrate on throwing and catching techniques in preparation to play ultimate frisbee.
- Track and Field: Identify skills and strategies for track and field events.
- Wiffle ball: Introduce basic throwing, fielding, base running and batting skills.
- Group Games: Cooperative games and skills in large group games such as Capture the Flag and Cricket.

Responsive Classroom

The Lower School uses the social curricular practices of *The Responsive Classroom*. Fourth graders build up their repertoire of greetings, as well as practice a good firm handshake and eye contact. These skills are used when they approach or greet adults and new students, as they are encouraged to explore new friendships and working partnerships. Students learn to resolve differences in a non-confrontational, open forum with mediation as needed. Students practice self-control and continue to develop the ability to focus during morning meeting or class discussions and speaking clearly and respectfully in morning meetings. Finally, students work on ways to include peers of both genders in group games and to play fairly; then they try to accept losses or setbacks without causing conflict.

Homework

Please refer to the BB&N Website: www.bbns.org/handbook, Lower School Policies and Procedures. Another resource, [HOMEWORK - A Guide for Lower School Parents](#), was first published and distributed to all LS parents in 1999, and is available for parents at Back-to-School Nights.

Grade Five Teachers

phone/voice mail

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Mathematics	Sandra Rojas	800-2448
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French	Kate Lavalle	800-6211
Spanish	Marisol Martinez	800-2427
Drama	Jenny Lifson	800-2439
Information Science	Heather Lee	800-2462
Technology	John Cumberbatch	800-2442
Music	Jenna Havelin	800-2481
Integrated Arts	Ashley Bartlett Emily Discenza	800-2430 800-2479
Physical Education	Ed Bourget	800-2437

*** Includes Language Arts, Mathematics and Social Studies instruction**

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GRADE FIVE CURRICULUM OVERVIEW

Language Arts

In fifth grade language arts, students' exposure to contemporary authors is broadened, and critical and analytical thinking skills are developed and advanced. Student reading comprehension is extended to include more inferential and abstract ideas. The focus of reading is less on literal understanding, and more on the interpretation of characters and theme. Students begin to write in greater detail and with more formal organization. They explore the genres of narrative, expository, and persuasive writing; and develop their ability to use precise vocabulary and figurative language to enliven their work. Language arts lessons are often integrated with social studies, the arts, and other classes.

In fifth grade, students:

- Practice literal comprehension skills by identifying the who, what, when, and where of stories
- Develop interpretive and analytical comprehension by thinking deeply about characters, theme, cause and effect, story structure, and the qualities of different literary genres
- Identify literary elements such as similes, metaphors, personification, and foreshadowing
- Enrich their vocabulary and understanding of etymology through their study of Greek and Latin roots
- Benefit from having opportunities to read aloud, practicing using precise language, and reading with appropriate pace and expression
- Use reading strategies to monitor and deepen comprehension, including making connections, questioning, predicting, inferring, and summarizing
- Read independently and regularly write and share responses to their independent reading
- Compose extensively in the genres of expository, narrative, and persuasive writing
- Learn that good writers improve their craft by focusing on six specific traits of writing: ideas, organization, voice, sentence fluency, word choice, and conventions
- Take notes on a regular basis
- Respond in writing to both literal and interpretive comprehension questions
- Support a written point of view with examples and quotes from the text
- Are held accountable for their spelling and for applying appropriate mechanics, and sentence and paragraph structures
- Examine models of good writing to learn specific strategies and tools they can apply to their own writing
- Receive feedback and guidance about their writing
- Demonstrate command of the conventions of standard English grammar and usage when writing or speaking
- As needed, may work with a learning specialist to receive additional support developing reading and writing skills

Social Studies

In fifth grade, students study how the choices, actions and innovations made by those who came to the Americas have influenced the establishment of the modern world. Through studying year-round the immigration experience - past and present (through the personal experiences of immigrants and refugees) students will be able understand the movement of people, and the importance of identity, and how it attributes to the America of today.

The essential understandings answered through this immigration study include:

- Why do people move?
- What have been the major migration patterns?
- What is the immigration experience?
- What are the effects of immigration? How does it contribute to personal identity?
- And then collective identity, particular of the culture of America?

Specific study skills taught in social studies include:

- Reading for information (historical and current)
- Gathering research material from multiple sources (online, text, personal experience)
- Understand the importance of primary sources and use of artifacts through inquiry
- Presenting findings in a variety of ways
- Note-taking and test-taking

Overall guiding essential questions addressed through social studies investigations include:

- Why is the study of history important?
- How / why do "facts" change over time?
- How / why does one discover the real story?
- What ethical dilemmas are uncovered through the study of history?
- How have historical events impacted the development of world that we know today?
- What does history have to do with me?

Mathematics

At BB&N we believe that math should be joyful and engaging. Our program grows children's fluency with numbers and is rich in numbers-based experiences. We provide opportunities at every level for students to engage in mathematical explorations, to reason mathematically, and to express their ideas. We strive to strike a balance between larger conceptual understandings, specific skills, and procedural fluency. We believe that all of our students can and will learn math.

Mathematics (continued)

A major goal of fifth grade math is to explore the connections between different representations of numbers, specifically fractions, decimals, and ratios. Students solidify their understanding of whole number multiplication and division and utilize efficient strategies including standard algorithms. Fraction and decimal operations are developed and percents are introduced.

Fifth grade uses high quality, research-based resources including the *Bridges in Mathematics* curriculum and the *Connected Mathematics Program*. Classes are co-taught by the homeroom teacher and a math specialist with an interactive approach in whole group investigations, small group activities, and individual practice. Students have math assignments four times a week.

In fifth grade students will:

- Identify numbers as prime or composite and find the prime factorization of a number
- Find factors and multiples of whole numbers
- Multiply multi-digit whole numbers using a variety of strategies including the standard algorithm
- Divide whole numbers and express remainders as fractions and decimals
- Use ratio and rate reasoning to solve problems
- Uses efficient strategies to model and solve multi-step problems with all four operations
- Writes simple expressions with whole numbers, fractions, and decimals to represent problems
- Add, subtract, and multiply fractions
- Add and subtract decimals
- Compare and order fractions, decimals, and percents
- Graph numbers on a coordinate plane
- Classify two dimensional figures

Science

In fifth grade, science classes include lectures, discussions, hands-on activities and labs. Listed below are units of study and highlights of content and skills covered.

Ecology

- Investigate the biotic and abiotic factors that make up an ecosystem
- Plan experiments to test the effect of different conditions on plant growth
- Study the effects of climate change on weather patterns, climate and their impacts on storms and access to water
- Quantitatively and qualitatively assess the challenges of different marine habitats
- Observe organisms and their physical and behavioral adaptations
- Design and conduct an animal behavior experiment
- Study food webs and their implications for conservation

Science (continued)

- Assess various human impacts on habitats and populations of organisms
- Visit Bluff Point State Park and the Mystic Aquarium in Mystic, CT (or similar location/institution) and survey the Long Island Sound, including seining for animals and measuring water chemistry; compare and contrast endangered ecosystems during aquarium programs; observe marine animals in aquarium setting

Lower School World Languages

Our goal is to help students to build a foundation for future language learning and to be prepared to communicate as global citizens of an interconnected world. To do this, we want to highlight and embrace student identities and provide an environment where they are comfortable taking risks and applying a growth mindset to language learning.

The Lower School World Language Department uses an approach to teaching languages that focuses on proficiency and communication in an engaging and low stress environment. Teaching with comprehensible input prioritizes the delivery of understandable messages that are personalized, meaningful, interesting and relevant to our students. The goal of our classes is for students to acquire Spanish or French through communication and active participation. When age appropriate, we aim to spend at least 90% of our classes in the target language focusing on listening and reading to provide input (as opposed to formal vocabulary and grammar instruction).

We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Fifth graders explore Spanish or French three times per week (2x45 minutes and 1x35 minutes). Spanish students continue to dive deeper and expand their foundational skills and French students continue to build upon the introduction to the language started in 4th grade. In both languages, speaking/listening warm-ups, daily routines and closing activities create predictable structure to support confidence and practice content learned in class. Students are expected to speak the target language in class and are supported and encouraged to do so with a variety of strategies. Class content strives to be engaging, focused on high-frequency words, and connected to meaningful content for the student. Repetition and spiral techniques allow students to build proficiency and overall comfort in the language. Fifth graders are challenged throughout the year to work with all three modes of linguistic expression: interpersonal, interpretive, and presentational. Typical classroom activities include songs, reading, story listening, drawing, writing, short video clips, projects, role playing, and games.

Music

Fifth grade students will engage in practicing, performing, improvising, and creating music using their voice and ukulele. All concepts listed below will be explored through a diverse repertoire of songs played on the ukulele in various playing styles. The ukulele will be explored as a melodic-, harmonic- and chordal/accompaniment-based instrument. Students will engage in listening exercises to expand their knowledge of different styles of music and will also explore the historical background and contextual aspects of the repertoire.

Key Musical Concepts:

- Rhythm
 - Learn to strum with a strong sense of beat and subdivision.
 - Learn various beat-driven and syncopated rhythmic strumming patterns.
 - Learn to mute and chuck on the ukulele.
- Melody and Harmony
 - Vocalize with proper technique and learn 2-part+ vocal repertoire.
 - Learn, perform, and improvise melodic/harmonic phrases on the ukulele using proper technique and artistic phrasing.
 - Learn to read and perform music in various major and minor keys.
 - Explore various major-, minor-, +7, +9, and suspension-chords on the ukulele.
 - Explore various chord progressions in major and minor keys on the ukulele.
- Form and Composition
 - Listen to, identify, learn, and perform multi-part vocal and instrumental pieces.
 - Create and improvise lyrics, melody, and harmonic chord progressions utilizing the voice and ukulele.
- Timbre
 - Watch, listen to, discuss, and identify musical instruments using the Western European Classical model (brass, woodwind, percussion, and strings) and the [Hornbostel-Sachs](#) classification system.

Integrated Arts

The goal of fifth grade integrated arts is for students to deepen their critical thinking skills, actively collaborate, and persevere through complex artistic challenges. We invite students to reflect and conceptualize their understanding of the world around them through art. As they embark on a study of immigration to the United States, their own personal identities and stories, those stories and voices from the communities around them, we look at those same themes, exploring and understanding them through the lens of art. In fifth grade we weave the awareness of point of view and perspective in all its forms into our work: physical, emotional, as opinion, voices that are heard and unheard, angles that are seen and unseen. Fifth grade integrated arts support students' fine motor skill development and, more broadly, their creative, social, emotional and global understanding.

Integrated Arts (continued)

Goals for the term are introduced, defined and explored through discussions and looking at a wide variety of international art and artists. In fifth grade, students are given more opportunity to design their own projects independently, allowing them to master all steps from creating the concept, to planning, drafting, choosing the materials best suited for the project, and time management skill.

Essential Questions We Explore Include:

- How do images help convey the meaning of words?
- What is craftsmanship?
- How does creating art help us understand ourselves and the time and place we live in?
- How does art help us understand the lives of people of different times, places, and cultures?

Key Content:

- Scientific Drawing
- Illustration & Visual Symbolism
- Graphic Design
- Woodworking
- Photography
- Soft Sculpture

Integrated Arts acts as a platform for collaboration across disciplines. This collaboration helps students see the connectivity between subjects and the interconnectivity of our world. These interdisciplinary connections emerge over the course of our studies, as students explore key questions and ideas through art-making. Our final products will vary from year to year based on the questions and curiosities of our students.

Drama

Fifth grade drama engages each student in improvisation work, small group scene work and a full-length homeroom play. Students learn to create characters, and create dialogues in both small and large groups. Learning to analyze scenes and scenarios and make connections to real life is all a part of the Improv unit. Small group scenes give students the opportunity to direct and be the actor in already created short scripts from age appropriate plays or books. Students learn to listen to each other's idea while getting to be the performers and audience members. The full-length play is presented before spring break and allows for each child to memorize quite a few lines, wear a costume and learn to rehearse towards a large performance in front of an audience.

Information Literacy/Library

Information science in fifth grade will focus on developing critical thinking skills and learning how to choose resources for a variety of research topics for their Social Studies projects in Immigration, and various Science, World Languages and Arts projects. Students also come to the library for help choosing books for independent reading and to discuss and review books.

All students will practice:

- Review using our school library catalog and exploring catalogs for local public libraries
- Exploring topics using pre-selected websites and reference tools including both print and electronic resources
- Creating short collaborative video reviews and trailers, and writing and recording individual book reviews to share
- Storing materials for use in class projects
- Keeping track of their sources
- Introduction to citing sources and creating a bibliography

Technology

At the BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years.

Coding:

In the technology lab students are taught coding using the Scratch programming language. In a safe and inclusive classroom setting, students are free to work autonomously on their projects and can work at their own pace, or they can collaborate on projects.

Student work on an e-portfolio of Scratch projects. The portfolio is a collection of projects that are integrated and showcase the student work. Students are encouraged to implement one or more aspects of science, technology, engineering, art or math (STEAM) into each of their Scratch projects. A catalogue of twenty (20) STEAM based project ideas is made available.

Regular project review helps with student executive function, e-portfolio design and implementation strategies best suited for the students' individual needs. Each student approaches the same requirements from different views (top-down, bottom-up or hybrid).

Robotics:

Students are presented with engaging open-ended real-world problems. They work in teams to develop solutions. Students being to formally learn about critical thinking and

Technology (continued)

apply it to lab challenges. Students take turns playing a leadership role as they build knowledge and develop their solutions.

Students continue to:

- Develop their executive function skills
- Develop an e-portfolio application architecture to showcase their work
- Develop critical thinking skills (analysis, communications, creativity, open-mindedness and problem solving)
- Develop the skills required to collaborate on joint projects
- Develop communication skills by sharing project ideas and expressing them non-verbally (storyboarding)

Physical Education

The Fifth Grade students are introduced to an intramural athletic experience in a variety of team sports, while focusing on mindfulness and relaxation breathing. The purpose of the curriculum design is to allow students the opportunity to play the sports that will be offered to them as sixth grade students. For many, playing on a team is a new experience but the underlying values of participation, effort, enthusiasm, and individual growth remain the same. Before any games are played, the group has a thorough review of skills, rules, and strategies. Classes are run as a team practice with skill development, drills, and a breakdown of situations and applications for use of the individual skills. Throughout the season the basic skills from fourth grade are reviewed and more advanced skills are introduced.

The games provide an opportunity for the student to participate on a team that will work for a common goal, something that they have been working toward throughout the Lower School Physical Education Program. The major theme behind the team sports curriculum is the concept that every student plays and contributes to the success of the group.

Sports Offered:

Fall Season

Cross-Country
Field Hockey
Flag Football
Soccer
Volleyball

Winter Season

Basketball
Floor Hockey

Physical Education (continued)

Gymnastics/Yoga
Mind and Movement

Spring Season

Lacrosse
Baseball/Softball Skills
Tennis
Golf
Track & Field

Responsive Classroom

The Lower School uses the social curricular practices of *The Responsive Classroom*. Fifth graders continue to develop affirming, positive community building skills; as well as develop flexibility in working in different teams, groups and partnerships. As a result, students are encouraged to establish new friendships with sensitivity to students seeking inclusion. They practice respecting all students and faculty/staff. Students take an active role in creating class rules, class events, and morning meeting or discussions. They strengthen their listening skills and wait time for responses, such as practicing self-control and speaking assertively and respectfully in morning meetings. Fifth graders are expected to positively support and affirm peers with different learning styles or pace. They work to show good citizenship both at BB&N and the greater Boston area. The goal students work toward is to become leaders and role models of the Lower School community.

Homework

Please refer to the BB&N website, www.bbns.org/handout, Lower School Policies and Procedures. Another resource, [HOMEWORK - A Guide for Lower School Parents](#), was first published and distributed to all LS parents in 1999, and is available for parents at Back-to-School Nights.

Grade Six Teachers

		phone/voice mail
Homeroom/L.A. 6H	Leila Huff	800-2412
Homeroom/S.S. 6M	Lora Mazaheri	800-2452
Homeroom/Math 6Z	Berhane Zerom	800-2429
Learning Specialist	Beth Chiasson	800-2436
Mathematics	Michael Cassin	800-2449
Science	Lauren Rader	800-2506
French	Kate Lavallo	800-6211
Spanish	Marisol Martinez	800-2427
Drama	Jenny Lifson	800-2439
Information Science	Heather Lee	800-2462
Technology	Maria Elena Derrien	800-2491
Music	Jenna Havelin	800-2481
Integrated Arts	Ashley Bartlett Emily Discenza	800-2430 800-2479
Physical Education	Ed Bourget Kelley Kingman Carol Ann Loftus	800-2437 800-2438 800-2234

Email addresses for all Faculty and Staff at BB&N follow this format:
First InitialLast name@bbns.org

GRADE SIX CURRICULUM OVERVIEW

Language Arts

The sixth grade curriculum focuses on specific skills for reading, writing, grammar and word study for a deeper understanding of and facility with the written word in a variety of contexts.

In sixth grade, students will:

- Use specific strategies for deeply engaging with literature, including questioning, making connections, summarizing, drawing inferences, identifying evidence from the text to support ideas.
- Identify and examine authors; use of literary techniques, such as figurative language, plot structure, imagery and characterization.
- Engage in meaningful discussions with peers to practice articulating their ideas and opinions in literature circles.
- Learn and practice specific strategies to use before, during and after reading to focus and enrich understanding and critical thinking, as well as to identify stated and implied main ideas, supporting details, and independently use methods of annotation.
- Make comparisons among cultures and genres and apply their conclusions and insights based on their experiences.
- Practice analytical writing through shorter and longer responses that are structured with a thesis statement, textual evidence, and analysis.
- Explore genres of poetry, fiction, nonfiction, and memoir.
- Examine models of good writing in the above genres and identify authors' techniques; practice specific strategies and tools to develop their own writing in these genres.
- Work on writing in various forms, ranging from creative writing, poetry, personal essays, and analytical responses.
- Use graphic organizers to plan their writing; create clear thesis statements, supported by evidence from readings, write strong introductions and conclusions, build on word study skills for effective, quality writing.
- Receive guidance and feedback in regular teacher conferences; receive extensive written feedback from teachers to apply future assignments, understand the role of presented expectations or rubrics in planning, evaluating and completing work.
- Receive support as needed in reading, writing, and study skills to meet the goals of the curriculum.

Social Studies

Students begin the year by studying the history of the United States through the lens of human rights. Students examine primary and secondary sources and engage in readings, reflections, and discussion in order to investigate American history and the direct connection to its shaping of our present society.

Social Studies (continued)

The class studies topics including Indigenous nations, European colonization, enslavement and abolition, suffrage, Reconstruction, the Jim Crow laws and segregation, and the Civil Rights Movement. The class places emphasis on underrepresented narratives, such as the experience of Indigenous Nations before, during, and after the founding of the country. As we consider these complex periods, students are encouraged to explore the implications of race, power, gender, and national origin in relationship to events in history and their enduring legacies today. Students regularly consider current events in class and for homework, making connections between past and present-day events.

As the year continues, students reflect on questions about the many ways that social change happens. An initial study engages students in an exploration of primary sources, helping to not only build understanding of a past event but also formulate questions that will guide further research. Students then research their chosen historical event, develop an overview, and prepare a summary of a present-day connection for display at a human and civil rights gallery. Next, students learn about the influence of various change makers and resistance movements, focusing their research on people who stood up for something that they believed important. The class completes a research project that culminates in a presentation where students teach the class about the protesters who they studied. This unit allows students the opportunity to research and better understand the experiences of protesters while discussing their virtues, weakness, setbacks, and accomplishments.

The class concludes with a study of Afghanistan. As a class, students use their learning during the year as a foundation in considering how history has shaped another country's present society. They engage in conversation around moving beyond the headlines to understand the nuance and diversity of experience and thought within a country. In groups, students research and develop a timeline of Afghanistan's history together. Students then uncover the voices of those living in Afghanistan to deepen their understanding of the lives, values, hopes, obstacles, and realities of the human experience in today's Afghanistan.

Mathematics

At BB&N we believe that math should be joyful and engaging. Our program grows children's fluency with numbers and is rich in numbers-based experiences. We provide opportunities at every level for students to engage in mathematical explorations, to reason mathematically, and to express their ideas. We strive to strike a balance between larger conceptual understandings and specific skills and procedural fluency. We believe that all of our students can and will learn math.

Grade Six sets the stage for the study of Algebra through the study of patterns, introducing the concept of variables. They systematize their work with rational numbers including the division of fractions. They explore the concept of rate and solve problems using unit rates and percents. In sixth grade students extend their understanding of area and perimeter to investigate volume and surface area. The fundamental ideas of data analysis are introduced, and students make and interpret various kinds of graphs.

[Gr. 6 p. 2 '23]

Mathematics (continued)

Sixth Grade uses high quality, research-based resources including the *Connected Mathematics Program*. Classes are taught in small groups four times a week, with an interactive student-centered approach. Students have math assignments four times a week.

In Sixth Grade students will:

- Use ratio reasoning to solve problems
- Add, subtract, multiply, and divide rational numbers including fractions, decimals, and percents
- Represent and solve problems using percents
- Graph, compare, and find absolute value of rational numbers
- Write and evaluate simple expressions
- Solve problems involving volume and surface area
- Describe patterns of change in words, data tables, graphs, and equations
- Describe center, spread, and shape of data

Science

The science program is a survey course in elementary human anatomy and physiology. In sixth grade, science classes include lectures, discussions, hands-on activities and labs. Listed below are the units of study and highlights of the content and skills covered.

Cells

- Discuss what it means for something to be alive
- Observe elodea and amoeba cells under a microscope
- Learn how cells carry out the basic processes of life

The Respiratory System

- Investigate how surface area to volume ratios affect oxygen absorption in the lungs
- Dissect sheep lungs
- Collaborate and develop Virtual Reality Tour of Respiratory System with World Languages

The Circulatory System

- Design challenge on building a model circulatory system
- Design and conduct an experiment investigating the relationship between heart rate and exercise
- Learn about the ABO blood typing system
- Dissect sheep hearts

The Digestive System

- Observe how enzymes break down starches into sugars
- Work together in groups to model how peristalsis works using tennis balls and nylon stockings

Science (continued)

The Reproductive System

- Learn about mitosis and meiosis and how genetic information is divided during cell growth
- Learn the structure, function and location of the various parts of the male and female reproductive systems
- Get answers to questions about sex and growing up with the help of the school nurse and school counselor

Lower School World Languages

Our goal is to help students to build a foundation for future language learning and to be prepared to communicate as global citizens of an interconnected world. To do this, we want to highlight and embrace student identities and provide an environment where they are comfortable taking risks and applying a growth mindset to language learning.

The Lower School World Language Department uses an approach to teaching languages that focuses on proficiency and communication in an engaging and low stress environment. Teaching with comprehensible input prioritizes the delivery of understandable messages that are personalized, meaningful, interesting, and relevant to our students. The goal of our classes is for students to acquire Spanish or French through communication and active participation. When age appropriate, we aim to spend at least 90% of our classes in the target language focusing on listening and reading to provide input (as opposed to formal vocabulary and grammar instruction).

We also strive to provide opportunities to explore other cultures and to do interdisciplinary work that allows students to connect and expand upon what they are learning in other places.

Sixth graders explore Spanish or French three times a week for 45 minutes. Sixth grade classes are a mix of students who are new to BB&N with a variety of backgrounds in language education and students who have studied French and/or Spanish earlier in the Lower School. In both languages, speaking/listening warm-ups, daily routines and closing activities create predictable structure to support confidence and practice content learned in class. Students are expected to speak the target language in class and are supported and encouraged to do so with a variety of strategies. Repetition, spiral techniques, and opportunities for personal choice and challenge allow students to build proficiency and overall comfort in the language. Class content strives to be engaging, focused on high-frequency words, and connected to meaningful content for the student. While traditional grammar instruction is not the focus of our classrooms, there is exposure to how to use a variety of high frequency verbs in the present tense, agreement of gender and number, negation, etc. Classroom communication focuses on comprehensibility and preparing students to know how to set themselves up for success with language learning as they move forward. Sixth graders are challenged throughout the year to work with all three modes of linguistic expression (interpersonal, interpretive, and presentational), as well as to interact with a variety of authentic resources to prepare them for using language skills in real world settings. Typical classroom activities include songs, reading, story listening, drawing, writing, short video clips, projects, role playing, and games.

Music

Sixth grade students will engage in practicing, performing, improvising, and creating music using their voice, midi keyboards, and the digital music software *SoundTrap*. Students will engage in listening exercises to expand their knowledge of different styles of music and will also explore the historical background and contextual aspects of the repertoire. Students will highlight various popular and electronic genres of music from around the world to inspire their own compositions. Students will be assigned composition projects that focus on different music industries.

Key Musical Concepts:

- Rhythm
 - Review various rhythmic components explored in grades 3-5.
- Melody and Harmony
 - Create melodic/harmonic phrases on *SoundTrap* using a midi keyboard.
 - Create compositions utilizing various major and minor keys.
 - Explore various chord progressions in major and minor keys using a midi keyboard.
- Form and Composition
 - Listen to, identify, learn, and create multi-part vocal and instrumental electronic pieces.
- Timbre
 - Watch, listen to, discuss, and identify musical instruments using the Western European Classical model (brass, woodwind, percussion, and strings) and the [Hornbostel-Sachs](#) classification system.
 - Explore various combinations of electronic sounds in compositions on *SoundTrap*.

Chorus/Musical All students participate in the Brick Building Chorus, a choral ensemble consisting of students in grades 5 and 6. Students perform at the December Winter Concert. Beginning in January, students rehearse in conjunction with the drama teacher towards performing a sixth grade class musical production in the spring.

Orchestra Students who study an orchestral instrument are *invited and encouraged* to play in the Lower School Orchestra which provides a valuable experience different from solo practice and lessons. The orchestra plays an important role in many of the school traditions for our community. Orchestra rehearses once a week before school on Friday mornings and performs at Lower School concerts and designated assemblies.

Integrated Arts

The goal for students in the Arts Rotation is to create a body of work that demonstrates their learning about color theory, composition, principles of design and form. Emphasis is placed on keen observation, symbolism and developing personal expressive style. Students will explore, analyze, and compare the work of contemporary and historical artists within the scope of the visual arts rotation program.

Integrated Arts (continued)

Essential Questions We Explore Include:

- How can an artist transform the ordinary to the extraordinary?
- How can simple things like numbers and colors represent something about us?
- How are masks used by cultures around the world and throughout time?
- How can we use elements of art to symbolically represent an idea?
- How do artists respond to the moment they live in through the ideas they explore and the materials they choose?

Key Content:

- Painting & Color Theory
- Ceramic Hand-building Methods
- Collage & Layering
- Symbolism & Surrealism
- Principles of Design

Sixth grade students also have the opportunity to choose to focus on a particular art form in our new elective program, which runs from Fall to early Winter. This year we are offering Songwriting, Improvisation, Painting and Printmaking.

Drama

The drama curriculum consists of three skills and goals:

1. Confidence building through improvisation, and group scene work.
2. Performance alone on stage through monologue and small group work.
3. Theater games that develop skills in the following areas: attention, imagination, physical awareness and narrative skills.

In addition, all sixth graders participate in a spring musical, which involves intense acting, singing, dancing and scenic design skills. The music is rehearsed during the school day with two performances for the school to which parents and friends are invited to one.

Information Science/Library

Information Science begins with a review of how to access and use our catalog, reference tools, and the library website and how to borrow materials from the library. Students will learn strategies for using a variety of sources, including web searches, with an emphasis on checking for reliability, critical thinking and problem solving. They will practice note-taking and explore new and recent fiction as well as nonfiction books. They will have opportunities to reflect on their learning style and try different approaches to collecting and organizing information. Skills they will be developing include, but not limited by the ability to:

- Formulate research strategies,
- Use search engines and reference resources to explore topics

Information Science/Library (continued)

- Check reliability and relevance of information
- Practice broadening and narrowing their focus
- Compare sources
- Evaluate websites and other materials with emphasis on reliability and relevance
- Understand the difference between recreational information and reliable Information
- Prepare a bibliography

Technology

At BB&N Lower School, it is our intention to integrate technology into the classroom in meaningful ways, and our goal is to teach students the skills necessary to be successful throughout the school year as well as to prepare them for future years. Through technological integration we give our students an introduction to word processing, spreadsheets and graphing, presentation software, three-dimensional design, internet safety and digital citizenship, online research, robotics, and programming. Our teachers create academic environments that facilitate student creativity, innovation, communication, and collaboration with others, while developing students into critical thinkers, problem solvers, and decision makers. Sixth grade students are exposed to various social studies, language arts, science, world languages, art, math, and problem-solving programs and projects that:

- Are developmentally appropriate
- Directly relate to classroom content
- Offer new ways of looking at traditional curriculum
- Encourage thinking and stimulate inquiry
- Foster collaboration, communication and creativity
- Challenge and motivate a wide range of students

Sixth grade students, during their weekly technology classes, are exposed to a variety of new skills and tools as well as continue to develop existing ones. Specifically:

- Google Platform: students gain knowledge and expertise creating Google forms/surveys, Google sheets for collecting and interpreting data, Google documents for word processing, and Google slides for presentations.
- Three-dimensional design: students learn to create and design three dimensional models using the TinkerCAD program. Student designs can potentially come to physical fruition via our 3D printers or by building with various materials.

Students are immersed in the Design Thinking process particularly during the first half of the year. They explore and practice each dynamic part of the Design Thinking process from empathizing with others and defining a problem to identifying and prototyping potential solutions. Students apply their understanding of these processes in multiple contexts such as bridge design and food ethics projects.

Physical Education

The Sixth Grade physical education program shifts to a team sports focused curriculum in which the students choose a sport to play for the entire season. The students will be placed on an interscholastic team and have an opportunity to compete against other schools. For many, playing on a team is a new experience but the underlying values of participation, effort, enthusiasm, and individual growth remain the same. Before any games are played, the group has a thorough review of skills, rules, and strategies. Classes are run as a team practice with skill development, drills, and a breakdown of situations and applications for use of the individual skills. Throughout the season the basic skills from fifth grade are reviewed and more advanced skills are introduced.

The games provide an opportunity for the student to participate on a team that will work for a common goal, something that they have been working toward throughout the Lower School Physical Education Program. The major theme behind the team sports curriculum is the concept that every student plays and contributes to the success of the group.

Sports Offered:

Fall Season

- Cross-Country
- Field Hockey
- Flag Football
- Soccer
- Volleyball
- Mind and Movement

Winter Season

- Basketball
- Fencing
- Ice Hockey
- Rock Climbing
- Squash
- Wrestling
- Mind and Movement

Spring Season

- Baseball
- Crew
- Golf
- Lacrosse
- Softball
- Tennis
- Track & Field
- Mind and Movement

Responsive Classroom

The Lower School uses the social curricular practices of The Responsive Classroom. Sixth graders continue to mature their skills of building class and community rules and understand why they must be followed. Students practice affirming, positive community building skills and self-control; develop flexibility in working in different teams, groups and partnerships. This includes inviting new friendships with sensitivity to students seeking inclusion and to positively support and affirm peers with different learning styles or pace. Students are expected to respect all students, faculty and staff. Sixth graders take an active role in class events, morning meeting or discussions with opportunities to strengthen listening skills and wait time for responses, such as speaking assertively and respectfully in morning meetings. The goal is for students to become leaders and role models of the LS community as well as to show good citizenship both at BB&N and the greater Boston area.

Homework

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[Gr. 6 p. 9 '23]