

Bertschi School

Curriculum Guide
2016-17



Learning Together, Playing Together

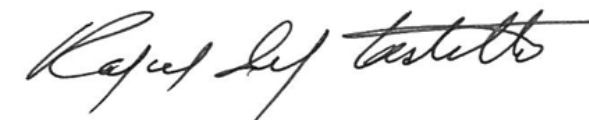
Our youngest learners come to Bertschi with an enormous capacity to learn. They are born explorers with an innate sense of wonder and awe. They thrive on opportunities that allow them to investigate how things work and why things happen. Over time, we guide students to develop a broadminded outlook that is supported by both skills and confidence. Bertschi graduates know how to learn as independent thinkers and as part of a collaborative team. They are encouraged and encourage others. They feel positively about themselves and model good citizenship in a global community. They do their part as good stewards of our planet and inspire others to do their part. They each know that every individual can make a difference.

All this happens through a curriculum that is woven together to achieve an integration of subjects. I invite you to take a look at our curriculum guide using the lens of content, but also using the lens of context. This guide is a result of years of collaborative work from our experienced educators. The Curriculum Guide is organized by grade and subject areas for the convenience of the reader. However, our grade level teachers and specialists work across disciplines to ensure that this scope and sequence fosters skill development over time, deep understanding, and a love for the learning itself.

Our curriculum does not exist in a vacuum. It is delivered within a "global village" where all children benefit from an environment where diversity is embraced at all levels. For example, diverse cultures are studied through year-long, project-based explorations with our own community members bringing context and perspective to these studies with their own history and celebrations. Another "delivery vehicle" for our curriculum is the campus itself. Our LEED Gold Bertschi Center and our Science Wing, the first certified "Living Building" in Washington State and the first in the world built to the Living Building Challenge 2.0 standard, are at the center of our commitment to sustainability. These buildings were designed to serve as exemplars and teaching tools so that children will discover principles, strategies, and technologies that prepare and empower them to create a more positive and sustainable future.

Finally, this is not a document etched in stone. Our curriculum is constantly being reviewed, updated and revised as we combine new research and new ideas with the timeless elements of educating children.

Rafael del Castillo
Head of School



Our Mission

Bertschi School educates children to become compassionate, confident and creative learners in a global community.

OUR VALUES

Our community values integrity, inclusiveness, respect, diversity, and a commitment to sustainability.

OUR APPROACH

Our **teachers** inspire academic excellence and individual success.

Our **curriculum** fosters intellectual curiosity and emotional maturity.

Our **school** encourages social responsibility and collaborative problem solving.

Our **community** supports and celebrates the unique gifts of every child.

DIVERSITY STATEMENT

At Bertschi School, we honor and support the unique contributions to our society made by people of all ethnic, economic, religious, racial backgrounds, physical ability, learning styles and sexual orientation. We strive to promote inclusiveness in all school areas, including school programs, community activities and recruitment of students, faculty, staff and trustees. We are actively committed to increasing diversity in our school community to reflect the region in which we live.

RESOURCE CLASS KEY:

1/2/3 = sessions per week






-  = 60 minutes
-  = 50 minutes
-  = 45 minutes
-  = 40 minutes
-  = 30 minutes

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Pre-Kindergarten

Young children come to school with an enormous capacity to learn. They have an innate sense of wonder and awe, and a natural desire for inquiry. They thrive on opportunities that allow them to explore and investigate how things work and why things happen. The PreK curriculum at Bertschi builds on each child's own experiences, knowledge, skills, attitudes, needs, interests and views of the world. Through a combination of inquiry-based learning and small group instruction, children develop a strong foundation for learning in all areas, including language, math, sciences and the arts. They develop socially and emotionally through interaction with their peers, teachers and others in the community. During the regular school day, children are involved in many different kinds of activities designed to help young learners explore, discover and grow. They will have opportunities to initiate their own learning and play, as well as take part in more guided learning with the support of their teachers.

CURRICULUM AREAS

Language and Literacy

Language provides children with a sense of identify and is a vital way in which they discover and make sense of the world around them. PreK children have increasing capacities for language and are continually developing interests in representation and symbols, such as pictures, numbers, and words. Children are given opportunities, encouragement and guidance in using language and emergent reading and writing skills naturally in their play and other meaningful contexts. Below are aspects of language and literacy along with ways PreK children may demonstrate their understanding.

Language is about:

- ~ Using language to imagine, create and express roles and experiences
- ~ Clarifying their own thinking and ideas through talk
- ~ Explaining events children have observed or are curious about

Linking Sounds and Letters is about:

- ~ Developing the ability to distinguish between different sounds
- ~ Becoming familiar with rhyme, rhythm and alliteration.
- ~ Understanding the connection between spoken and written sounds
- ~ Learning to link sounds and letters together
- ~ Beginning to sound out and blend letters together

Reading is about:

- ~ Enjoying stories, books, songs, chants and rhymes
- ~ Recognizing that print carries meaning

~ Wanting to hear favorite stories again and again

~ Identifying letters and words with special meaning, such as the letter of their first name or the word mom

Writing is about:

- ~ Building an understanding of the relationship between the spoken and written word
- ~ Representing meaning through making marks, drawing and emergent writing
- ~ Using written symbols for various purposes in their play

Handwriting is about:

- ~ Understanding that childrens random marks, lines and drawings develop and form the basis of recognizable writing

Mathematics

Most young children come to school already knowing a great deal about numbers and math. Children seem to have an intuitive knowledge of mathematics, which develops through curiosity about the physical world and real-life experiences involving numbers, shapes, measurement and patterns. Children are natural problem solvers, often finding a variety of possible solutions and posing their own questions along the way. The PreK curriculum aims to develop math concepts by providing authentic experiences which allow children to make connections between what they already know and new ideas and knowledge. Below are aspects of mathematics along with ways PreK children may demonstrate their understanding.

Number Sense and Counting is about:

- ~ How children gradually use numbers and counting in play
- ~ Developing an awareness of the relationship between numbers and amounts

2 **DRAMA**

1 **LIBRARY**

2 **MUSIC**

1 **PHYSICAL EDUCATION**

2 **SPANISH**

2 **CREATIVE MOVEMENT**

~ Learning to recognize and use numbers reliably

Problem Solving is about:

- ~ Using a variety of materials and equipment to solve problems to their own satisfaction
- ~ How children use trial and error to find solutions to problems
- ~ Trying out alternative strategies based on previous experiences
- ~ Demonstrating flexibility and creativity when solving problems

Shape, Space and Measurement is about:

- ~ How children notice, describe, and create patterns in their play, such as in paintings and construction
- ~ Using mathematical language to describe size, shape and length
- ~ Developing spatial understandings by fitting things together and taking things apart
- ~ Rearranging and reshaping objects and materials for a purpose

Integration of the Environment

Children form an understanding of themselves and their place in the world through their interactions with others and the environment. The PreK learning environment at Bertschi is rich in opportunities for children to express their unique selves through the world of social studies, arts and sciences in all forms. Play and academic work are not distinct categories for young children, therefore learning, playing and doing are inseparable. Childrens learning and playing is naturally multi-layered, as they instinctively dip in and out of a variety of skills and subject areas. PreK children are highly encouraged to explore their own interests and may choose to spend time discovering how magnets work, observing and sketching

nature, making up a new game with friends or trying out different painting techniques. These personal inquiries allow children to fully immerse themselves in arts and sciences in a way that is truly meaningful. The teacher participates in the learning, guiding the child as they clarify and expand their own thinking. As children explore their own interests in regards to the arts and sciences they also have a wealth of opportunities to develop social, communication and self-management skills.

Being Immersed in the Classroom Environment is about:

- ~ Exploring beyond the borders of home to neighborhood, city, and further afield
- ~ Pondering cultural aspects of the world and how they influence the classroom
- ~ Sharing familial and cultural diversity as it affects friendships and community
- ~ Owning opportunities to care for the outdoor environment: garden tending, composting, recycling
- ~ Seeing beauty, art and potential in the everyday and growing interest and curiosity in ideas and subjects over a period of time

RESOURCE CLASSES

Drama

In drama, Pre-K students are introduced to the actors tools: voice, body, mask, and imagination. They learn how these tools are used on stage, and in life, to tell stories. They learn in small groups and pairs, through games and dramatic exercises, how to work together both onstage and off.

Skills taught include: listening, following directions, communication, working supportively within a peer group, body control, character animation, and memorization. \

Students then work together to develop an original production based on a familiar childrens book, Fairy Tale or Nursery Rhyme. The students participate in the improvised scripting of the story, work with teachers to choose characters and then, following several weeks of rehearsal, perform the piece for fellow students and parents.

Most costumes, sets, and properties created are built from recycled materials. These are reused or sent home for further use by students after the production closes.

Library

Pre-kindergarten children experience the joy and wealth of books. They are exposed to many picture books with stories focusing on topics such as family, animals, transportation, global awareness, friends, and toys. Throughout the year, books are included that touch on waste, recycling, habitat protection and respect for the natural world. Weekly visits to the library include storytelling, selecting books, and learning appropriate care for them.

Music

Music is a part of the childrens daily routine. In addition to daily songs and chants in the classroom, the children have music instruction twice a week.

Music instruction includes:

- ~ Singing appropriate folk and composed songs from around the world
- ~ Moving to music
- ~ Working on developing skills in beat and rhythm
- ~ Discriminating between comparatives (e.g. louder from softer)
- ~ Ear training and music memory
- ~ Listening skills and focused listening
- ~ Knows when music has an accompaniment
- ~ Shows enjoyment and creativity
- ~ Shows growth in motor development
- ~ Music appreciation and sharing

Physical Education/ Movement

The Physical Education program aims to develop and enhance skills, coordination, and physical fitness in each child at every grade level. The overall program seeks to promote enjoyment of physical activity and lifetime habits of physical fitness for purposes of general health, wellness and strong sense of self. The pre-k students are exposed to basic locomotive skills, creative movement exploration, manipulative skills, and cooperative games and activities.

In all grade levels, the concept of environmental sustainability is addressed in a variety of ways. Students learn conservation skills by making their own equipment, such as hula hoops and juggling balls, and by repurposing materials that would otherwise be recycled or discarded. During Earth Week, the students play games and activities that explore environmental concepts.

The pre-k physical education activities incorporate concepts and skills that encourage the students to:

- ~ Develop body control while in motion through locomotive activities such as running, skipping, hopping, and galloping
- ~ Introduce static motor skills such as balancing, bending, swaying, twisting, and turning
- ~ Explore manipulative skills such as rolling, bouncing, catching, and throwing
- ~ Follow rules of the game, understand and exhibit issues of fairness, and practice safety
- ~ Cooperate with others through partner and group activities
- ~ Enjoy participation in physical activity

Spanish

Very young children who learn a second language naturally acquire skills and abilities at a level appropriate to their age. Gestures, imitation and repetition are very important in the first years of learning a new language. Each child is unique and learns in different ways, they have limited speaking skills, but most are intrigued about learning a new language.

At the beginning children will imitate what the teacher does, absorbing the language through habitual routines. The Total Physical Response (TPR) technique is used extensively where children listen and act out commands.

- ~ Each lesson will teach in a way that facilitates creative thinking.
- ~ The children will discover the meaning of the words and understanding through material rich in content which is age appropriate.

Spanish culture and habits will be introduced through picture books, (sequences) fables and folk tales from the diverse Latin American cultures, finger puppets, marionettes, flash cards and memory cards, cultural appreciation from distinct regional traditions and celebrations of Spanish speaking countries (as citizens of a global society), songs and games (catching and throwing).

Specific word content of this program includes greetings, colors, shapes, body geography, feelings, weather, seasons, five senses, days of the week, clothes, house and family, transportation, nocturnal animals, animals that hibernate, food, farm animals, products from the farm, and numbers.

Learning Services

In pre-kindergarten, children are developing milestones in large motor movement, hand and finger skills, listening, early literacy and math concepts, following multi-step directions, and social cooperation. Learning Services supports the early learning development of young children with diverse learning styles, needs, and abilities by providing:

- ~ Early literacy screening support upon request
- ~ Speech and language screening upon request
- ~ Specialist referrals (speech/language, occupational therapy, etc.)
- ~ Admissions team participation
- ~ Curriculum support for teachers
- ~ Resources and conference support for parents
- ~ Summer learning options

Kindergarten

The kindergarten program supports the child's joy and enthusiasm for learning. Developmentally appropriate activities and materials are designed to meet individual and group needs and abilities. The program allows children to explore and discover within an integrated curriculum. Thematic units or activities are often enriched by collaboration with resource classes. The curriculum reflects and honors the experiences and perspectives of different cultural groups. Children are encouraged to be responsible for the care of the room and materials. In addition, students learn about sustainability through experiences that connect them to the natural world.

CURRICULUM AREAS

Language Arts

Children are immersed daily in a wide variety of literacy experiences to help nurture a love of language and a passion for reading. Literature, which enhances and reinforces concept building in the arts, sciences, and world diversity, is incorporated throughout the year.

Reading

Students will learn to:

- ~ Track from left to right and top to bottom
- ~ Understand concepts of print and structural features of text
- ~ Develop phonemic awareness
- ~ Identify and name upper and lower case letters
- ~ Understand the association between letters and sounds
- ~ Recognize initial and final consonants in words
- ~ Recognize rhyme
- ~ Follow simple oral instructions
- ~ Build a basic, beginning sight word vocabulary
- ~ Begin to use decoding strategies such as picture cues, context clues and phonics skills
- ~ Understand story sequence
- ~ Dictate a group of sentences related to an idea or group of illustrations
- ~ Participate in group stories and dramatizations
- ~ Develop comprehension skills

Writing

Students will:

- ~ Produce a portfolio of writing that demonstrates their growth as a writer
- ~ Engage in a combination of activities through drawing, dictating, discussion, and writing that introduces them to the three text types: narrative, informational and persuasive
- ~ Be introduced to text structures and graphic organizers to begin their learning/ understanding of a prewriting process
- ~ With guidance and support from adults, will produce and publish writing
- ~ Make predictions and inferences
- ~ Identify rich language through read-alouds led by the teacher
- ~ Write and name all upper and lower case letters
- ~ Write own name and then names of some family members and friends
- ~ Form most letters correctly
- ~ Use phonemes and letter knowledge in phonetic spelling when writing independently
- ~ Build a repertoire of some conventionally spelled two- or three-letter words
- ~ Show awareness that writing has conventions (some student writing shows directionality)
- ~ Write for own satisfaction and purpose
- ~ Begin to write labels, signs, or captions for drawings and models
- ~ Use complete sentences when dictating ideas or information
- ~ Recall main idea and details in writing activities
- ~ Begin to read own writing

- 2 ART
- 2 DRAMA (12 weeks)
- 1 LIBRARY
- 2 MUSIC
- 2 PHYSICAL EDUCATION
- 2 SPANISH
- 1 CREATIVE MOVEMENT

Speaking and Listening

Students will:

- ~ Attend to oral stories and poems
- ~ Maintain eye contact with others
- ~ Listen for information
- ~ Follow directions during classroom routines
- ~ Participate in group storytelling, chants, and songs
- ~ Express thoughts and ideas clearly
- ~ Use developmentally appropriate grammar
- ~ Speak at a rate and volume that fosters good communication
- ~ Allow others to speak without unnecessary interruptions
- ~ Contribute to group discussions
- ~ Suggest solutions for problems

Mathematics

The goal of our daily math instruction is to provide concrete experiences than connect students to the mathematical concepts outlined in the enVision math program. Developmentally appropriate math activities in kindergarten give students the foundational skills needed for more abstract and symbolic work in later grades.

Number and Operations

- ~ Use numbers, including written numerals, to represent and solve quantitative problems
- ~ Count objects in a set and creates a set with a given number of objects
- ~ Compare or order sets of numerals by using both cardinal and ordinal meanings
- ~ Model simple joining and separating situations with objects

~ Choose, combine, and apply effective strategies for answering quantitative questions

~ Recognize the number in a small set

~ Count and produce sets of given sizes and the number in combined sets

~ Count backward

~ Skip counts by 5s and 10s to 100

Algebra

~ Identify, duplicate, and extend patterns

Geometry

~ Know and reproduce basic shapes and use vocabulary that corresponds

~ Identify and build symmetry, reconstructs objects

Measurement

~ Understand procedures to measure length and weight with non-standard units

~ Tell hour on an analog clock

~ Use monthly calendar as a tool

~ Know the value of a penny, nickel, and dime; recognize quarter

Data Analysis and Probability

~ Sort and classify according to specific attributes

~ Perform simple data collection

~ Interpret and create basic graphs

Social Studies

The curriculum focuses on the social development of the child through activities that foster self-esteem, independence, group awareness, and cooperation. We emphasize problem solving, helping children examine how their behavior affects the environment and, conversely, how their environment affects them. We look closely at the child’s relationship in family, home and school. Social skills include learning to respect and honor cultural differences. Thematic units include family structures of the students as well as around the world. Celebrating cultural differences of our school community and beyond is an integral part of the curriculum.

History

Students will:

~ Develop a concept and appreciation of other cultures

~ Understand the relationship of the individual to family, community, and school

~ Explore traditions, leaders, and holidays

~ Recognize devices for measuring passage of time (clocks, watches, calendars)

Geography

~ Understand the concept of a neighborhood

Civics

~ Develop self-awareness

~ Communicate own feelings and beliefs while listening to viewpoints of others

~ Develop community building skills

Economics

~ Learn to determine what to recycle, compost and re-use; conserve water, electricity, and other materials thereby taking an active role in sustainable practices

~ Recognize the differences between basic wants and needs

~ Recognize that people use money to purchase goods

Health and Science

Health topics are covered daily. We teach the importance of getting enough sleep, eating correctly and exercising. We discuss eating healthy snacks and lunches and the importance of drinking enough water. We practice the proper way to cough, sneeze, and wash hands. Students learn to dress for the weather. We have lessons that focus on emotional health which include feelings, impulse control, anger management, and conflict resolution.

Kindergarten classes work with their third grade buddy classes to tour the campus and identify examples of sustainability. Students in kindergarten and pre-k take regular walks to a community garden in the school’s neighborhood. They investigate the different types of plants and learn how to be good stewards.

Through these activities the children develop a sense of wonder and care for the natural world.

Key Concepts:

~ Gardens are important parts of communities

~ Gardens can provide habitat for animals and crops for people

~ Planting and taking care of a garden requires planning and commitment, and the whole community benefits

Children begin to develop accurate concepts through hands-on experience and exploring questions about the world around them. Often well-selected and conceptually and factually correct fictional literature is used to stimulate conversations and investigations.

RESOURCE CLASSES

Art

In kindergarten, students are introduced to the elements of art, experiencing projects that emphasize line, color, shape, texture and pattern. They build their fine motor skills and are introduced to many different art processes (drawing, painting, printmaking, mixed media, clay, sculpture, fabric arts). Of fundamental importance in teaching art is providing a safe environment for children where they are free to express themselves and take creative risks. The focus is on fun and exploration.

In art, recycled materials are used widely, and conservation and respect for materials is emphasized. Students learn about artists and cultures that use recycled and found objects. Art can be a vehicle to express ideas and educate others about sustainability. Kindergarten students demonstrate an understanding in the following areas:

~ Conserving water during hand-washing

~ Using different types of lines

~ Using lines to invent shapes

~ Recognizes, names and creates geometric shapes

~ Identifies textures (rough, smooth, etc.)

~ Identifies and names primary and secondary colors

Drama

Kindergarten students receive an introduction to basic acting theory, along with general theater vocabulary, all with a strong emphasis on storytelling. Students are introduced to the actors’ tools: voice, body, mask, and imagination and how these tools are used on stage, and in life, to tell stories. Emphasis is placed on achieving individual and group focus to achieve a common goal of performing one story together as an ensemble. Stories and performance subject matter are typically chosen from literature. Stories may be fictional, mythical or cultural in nature. Students develop characters in small groups or pairs, with most characters based on animals or other non-human persona. Most costumes, sets and properties created are built from recycled materials, and reused or sent home

for further use by students after production closes. In addition, limited music and movement components are explored as well as the elements listed below:

~ Basic understanding of the areas of the stage

~ Limited memorization

~ Exploration and development of a “character”

~ Listening and following directions

~ Body control and focus

~ Basic understanding and use of Actors Tools: Voice, Body, Mask, Imagination

~ Collaboration and ensemble development

~ Exploration of the audience/performer dynamic

Library

Kindergarten classes visit the library weekly. Library time includes storytelling and time for each child to select a book for the week. Materials shared in story time often reflect the theme for the week from classes such as an appreciation of other cultures, neighbors, sustainability or insects. Children are taught about book parts, their care, the need for each book to have an “address,” and the concept of subjects when looking for materials.

Their experiences include:

~ Caring for books

~ Respecting other library users

~ Identifying book parts

~ Identifying subjects of interest

~ Distinguishing between imagination and information (fiction and nonfiction)

~ Learning that each book has an “address” in the library

~ Following circulation procedure

Music

Music is part of the children’s daily routine. The primary goal of the music program is to reinforce and develop the love of music that is instinctive to each child.

The kindergarten student:

~ Hears and makes loud and soft sounds

~ Hears and makes high and low tones

~ Hears and makes a steady beat, long and short sounds, and fast and slow tempos

~ Hears and makes echoes, and tells sections apart

~ Knows when music has an accompaniment

~ Shows enjoyment and creativity

~ Shows growth in motor development

~ Music appreciation and sharing

Physical Education

The Physical Education program aims to develop and enhance skills, coordination, and physical fitness in each child at every grade level. The overall program seeks to promote enjoyment of physical activity and lifetime habits of physical fitness for purposes of general health, wellness and strong sense of self. Kindergarten students expand upon development of basic locomotive skills, creative movement exploration, manipulative skills, physical fitness activities, and cooperative games and activities.

In all grade levels, the concept of environmental sustainability is addressed in a variety of ways. Students learn conservation skills by making their own equipment, such as hula hoops and juggling balls, and by repurposing materials that would otherwise be recycled or discarded. During Earth Week, the students play games and activities that explore environmental concepts. We discuss carbon-neutral ways to travel and exercise.

The kindergarten physical education activities incorporate concepts and skills that encourage the students to:

~ Further develop body control while in motion through locomotive activities such as running, skipping, hopping, and galloping

~ Enhance static motor skills such as balancing, bending, swaying, twisting, and turning

~ Strengthen manipulative skills such as rolling, bouncing, striking, kicking, catching, and throwing

~ Follow rules of the game, understand and exhibit issues of fairness, and practice safety

~ Understand and identify boundary lines of playing space

~ Cooperate with others through partner and group activities

~ Develop fitness components such as muscular strength (particularly core strength), balance, endurance and agility

~ Enjoy participation in physical activity

Spanish

In kindergarten, the children learn primarily through imitation and repetition and the

introduction of Total Physical Response (TPR) where the children act out a response to a teacher’s request.

Children copy what they hear and have a natural aptitude for understanding. In Kindergarten imitation and repetition as well as “Total Physical Response” (TPR) technique used in Pre-K are still playing an important part in their process of acquiring a second language. By internalizing the sound system of the language, basic vocabulary and basic grammatical structures, they will learn to interact and communicate unfolding naturally a foundation to express themselves and their feelings at a basic level in Spanish.

Since the lesson will be taught in the Spanish classroom, the children will be more intrigued with their total Spanish immersive environment, which will be inspirational and encouraging.

Their class curriculum in this grade honors different cultural groups’ experiences, and by mutual collaboration with the class teacher, we’ll be sharing topics and vocabulary to enrich the children’s learning.

Spanish vocabulary and small sentence formation will be taught through songs, games, picture books (sequences), fables and folk tales from Latin America cultures, finger puppets, marionettes, flash cards and memory cards, cultural appreciation and celebrations of Spanish speaking countries.

Specific content of this program includes reinforcement of greetings and introductions, review colors, further vocabulary of body parts, feelings, five senses, family members and traditions, pets, review weather and seasons, days of the week, clothes, transportation, city, zoo, food, review farm animals and products from the farm, numbers, and insects.

Learning Services

In kindergarten, children are developing phonemic awareness, letter/sound recognition, counting and sorting competency, small motor abilities, and social skills. Learning Services supports the development of children with diverse learning styles, needs and abilities by providing:

~ Twice yearly developmental assessments

~ Speech/language screenings upon request

~ Pre-readers and early readers differentiated reading groups in partnership with classroom teachers

~ Admissions team participation

~ Classroom math extension

~ Curriculum support for teachers

~ Resources, specialist referrals and conference support for parents

For an additional fee, one to one specialized tutoring is also available in phonemic awareness, early phonics and sight word reading, math concepts, visual/spatial and handwriting skills using research-validated, structured curriculum. Learning specialists are available to attend parent/teacher conferences and provide ongoing progress reporting.

First Grade

In first grade, curriculum and instruction are designed to develop children's self-esteem, sense of competence, and positive feelings toward learning. Each child is viewed as a unique person with an individual pattern and timing of growth. Different levels of ability, development, and learning styles are expected, accepted, and used to design curriculum. Children are allowed to move at their own pace in acquiring the important skills they need to be successful. The curriculum is integrated; academic areas and the arts are combined to explore specific concepts and themes. Learning occurs primarily through skill-focused lessons, projects and learning centers, and playful activities that are concrete, real, and relevant to children's lives as students today and stewards of our Earth tomorrow. Our curriculum honors the experiences and perspectives of different social groups. The environment is designed to encourage mutual respect, personal responsibility, cooperation, natural curiosity, creative thinking and problem solving skills.

CURRICULUM AREAS

Language Arts

Reading, writing, listening, and speaking are the four essential components of our literacy program. Literature selections as well as our writing topics often provide opportunities for discussions revolving around personal characteristics that create positive global citizens. First graders participate in literature circles, which provide the opportunities to think about, discuss and respond to books they read and are read to them.

* The goal of our language and literacy program is to give students the tools and confidence to be self-motivated writers and readers.

Reading

Students will understand and apply their knowledge by:

- ~ Selecting "Just Right Books"
- ~ Learning about high quality children's literature
- ~ Engaging in guided reading groups
- ~ Exposure to phonics rules demonstrated in weekly lesson
- ~ Exchanging ideas through read alouds and shared readings
- ~ Highlighting authors' work through the Author studies
- ~ Exploring RINGO (reading BINGO) projects

Writing

Students will understand and apply their knowledge by:

- ~ Producing a portfolio of writing that demonstrates their growth as a writer

~ Engaging in activities that further their knowledge and comfort with the three text types: narrative, informational and persuasive

~ Text structures and graphic organizers are modeled and used to develop learning/ understanding of a prewriting process.

~ The editing process is introduced, allowing students to produce and publish writing with greater attention to content and grammar.

~ Identifying proper letter formation using the Handwriting Without Tears methods

~ Becoming more proficient in spelling through Spelling Connections

~ Using spelling knowledge with weekly reviews in the second half of the year

~ Producing powerful poetry

Mathematics

The goal of our daily math routine is to meet the needs of each student in the class through fluid math groupings. The math work occurs through small group lessons, differentiated instruction, jointly developed curriculum and math stations. Developmentally, children begin to move from concrete materials to more symbolic work using enVision math as the main text for the program and manipulatives, games and creativity to support the learning

Content Includes:

Number and Operations

- ~ Recognize and write numbers 1-100
- ~ Develop strategies for adding and subtracting larger whole numbers
- ~ Delve into fractions
- ~ Learning addition and subtraction fact families

1 ART

2 DRAMA (12 weeks)

1 LIBRARY

2 MUSIC

2 PHYSICAL EDUCATION

1 SCIENCE

2 SPANISH

TECHNOLOGY (project-based)

CREATIVE MOVEMENT (project-based)

~ Understand the effects of adding and subtracting whole numbers

~ Develop and use strategies for whole number computations with a focus on addition and subtraction up to two digit addition and subtraction

~ Skip count by 2s, 5s and 10s

~ Compare and order one to two digit numbers on a number line

Algebra

~ Use concrete, pictorial and verbal representation to develop an understanding of invented and conventional symbolic notations

~ Analyze how both repeating and growing patterns are generated

~ Learn properties of numbers including odd and even

Geometry

~ Compose plane and solid figures

~ Recognize and create shapes that have symmetry and part-whole relationships of shapes

~ Develop a background for congruence, measurement, and geometric properties

Measurement

~ Record date using calendars and picture and bar graphs

~ Strengthen measurement skills, including distance and time

~ Select appropriate unit and tool for the attribute being measured

Data Analysis and Probability

~ Represent data using concrete objects and graphs

Problem Solving

- ~ Recognize a variety of problem solving strategies and learns when to apply them
- ~ Investigate mental arithmetic and logical thinking

Social Studies

The first grade focus is on families and community. In our classrooms, children explore values, social relations, and learn respect for individual differences. In taking a multi-cultural approach to social studies, we bring in folktales from various cultures around the world. Thematic units include: family and family structure, folktales and myths, and Flat Stanley.

History

Students will:

- ~ Share individual family stories
- ~ Develop appreciation of various people’s backgrounds through literature
- ~ Explore folktales and myths from around the world
- ~ Discuss how communities and family life have changed over time

Geography

Students will:

- ~ Explain basic geography terminology
- ~ Use basic map skills such as symbols and cardinal directions to locate places
- ~ Describe how climate, location, and physical surroundings affect the way people live and work

Civics

Students will:

- ~ Know and apply traits of a good citizen
- ~ Celebrate students’ individuality in family and community
- ~ Embrace a variety of family structures
- ~ Encourage empathy and respect for others
- ~ Develop problem solving and anger management skills
- ~ Create cohesiveness in the classroom by understanding individual gifts and needs
- ~ Practice strategies for impulse control

Health

Health topics are addressed daily. We teach the importance of getting enough sleep, eating right and exercising. We have discussions about eating healthy snacks and lunches and the importance of drinking water. We encourage sustainable practices by packing lunches in a waste free manner and recycling and composting in the classroom. We also have silverware in the classroom as opposed to plastic. We practice the proper way to cough, sneeze, and wash hands.

RESOURCE CLASSES

Art

Art uses a multicultural approach and teaches cooperative group skills and problem solving. Of fundamental importance in teaching art is providing a safe environment for children where they are free to express themselves and take creative risks. First grade students continue to explore the elements of art through increasingly complex projects. Art is integrated within the class curriculum as well.

In art, recycled materials are used widely, and conservation and respect for materials is emphasized. Art can be a vehicle to express ideas and educate others about sustainability. Students learn about artists and cultures that use recycled and found objects. Students will demonstrate their competency by:

- ~ Identifying line direction (e.g. horizontal, vertical) and quality
- ~ Identifying and using geometric and organic shapes
- ~ Identifying actual shapes and texture
- ~ Identifying and mixing secondary colors from primary colors
- ~ Using repetition of several elements to create patterns
- ~ Using art tools and materials safely and appropriately
- ~ Identifying how feelings are expressed through art

Drama

First graders experience a review of previously introduced themes and theory, with an increased emphasis on physical and vocal character development, using gesture and expression as well as vocal detailing. Students are given more responsibility in working in smaller groups, or just with partners, with expanded text and story elements. Additional keen focus elements are introduced, such

as the idea of the “fourth wall,” the invisible boundary that separates the audience from the world of the play, and the concept of “suspension of disbelief.” Most costumes, sets, and properties created are built from recycled materials, and reused or sent home for further use by students after production closes. Sound design is used to support the story and characters. In addition, some or all of the following elements or ideas may be introduced:

- ~ Ongoing exploration of the Actors Tools: voice, body, mask and imagination
- ~ Vocal and emotional projection and articulation
- ~ Listening and following directions
- ~ Memorization
- ~ Storytelling
- ~ Ongoing development of audience/ performer dynamic
- ~ Continued practice of individual and group goal work

Library

First grade students are assisted in locating materials (fiction and nonfiction) that fit their growing skills, interests, and needs. Students enjoy many kinds of books reflecting an increased awareness of global citizenship and responsibility for our planet. The students experience and reflect upon the annual Washington State Children’s Choice Picture Book selections and participate in the statewide vote to determine the award winner. Library time is spent in hearing stories, talking about our reading, and selecting books to take back to the classroom. Students learn to:

- ~ Locate materials: picture books, nonfiction, folktales, magazines, and beginning chapter books
- ~ Check out and return materials
- ~ Using keywords, locate materials on the computer catalog
- ~ Early literacy concepts
- ~ Practicing library rules and manners

Music

Music plays a basic role in the emotional and intellectual development of the child, and enriches all of life’s experiences. In addition to daily songs and chants in the classroom the children have music class, where they are introduced to music from around the world.

The first grade student:

- ~ Hears differences in dynamics and tempos

- ~ Recognizes different kinds of sounds (timbre)
- ~ Understands the difference between beat and rhythm
- ~ Distinguishes between high and low
- ~ Knows that music has form
- ~ Is able to hear and make simple kinds of harmony
- ~ Music appreciation and sharing

Physical Education

The Physical Education program aims to develop and enhance skills, coordination, and physical fitness in each child at every grade level. The overall program seeks to promote enjoyment of physical activity and lifetime habits of physical fitness for purposes of general health, wellness and strong sense of self. First grade students are exposed to basic locomotive skills, creative movement exploration, manipulative skills, and cooperative games and activities.

The first grade curriculum focuses on continuing to enhance basic locomotive and manipulative skills, in addition to more complex concepts of physical fitness and increased attention on cooperation. Manipulative skills are reinforced in group and team games that incorporate locomotor skills such as running, dodging, and jumping.

In all grade levels, the concept of environmental sustainability is addressed in a variety of ways. Students learn conservation skills by making their own equipment, such as hula hoops and juggling balls, and by repurposing materials that would otherwise be recycled or discarded. During Earth Week the students play games and activities that explore environmental concepts. We discuss carbon-neutral ways to travel and exercise.

The first grade physical education activities incorporate concepts and skills that encourage the students to:

- ~ Further develop body control while in motion through more complex locomotive activities and games that include running, dodging, leaping, jumping, and landing
- ~ Develop concepts of transfer of weight through locomotive activities, animal movements, and tumbling activities
- ~ Enhance static motor skills such as balancing, bending, swaying, twisting, and turning
- ~ Integrate manipulative skills into partner and group game situations

- ~ Move and respond to music by exploring rhythm, pathways, and changes of direction and speed
- ~ Follow rules of the game, develop an understanding of sportsmanship and fair play, and practice safety
- ~ Cooperate with others through partner and group activities, and develop teamwork skills
- ~ Enhance components of physical fitness such as muscular strength (particularly core strength), balance, cardiorespiratory endurance and agility.
- ~ Enjoy participation in physical activity

Robotics: Integrating Science, Technology and Engineering

Tinkering, coding and robot-based hands-on technology engages and motivates students in STEM concepts while equipping them with real-world knowledge and 21st century skills. Robotics at Bertschi provides an open-ended, challenge-based think lab, whereby students can design and refine ideas and bring those ideas to life.

First graders at Bertschi begin robotics with Dash. App based coding lets students explore the capabilities of the robot, allowing them to focus in on coding, creating behaviors and exploring usages for the robot’s lights, sounds, sensors and movements. Bertschi students enjoy a 1:1 robotics experience.

Science

The first grade program is based on research that shows children learn science best through concrete experiences. As students progress through each grade, they acquire new knowledge and skills and develop extended scientific-reasoning abilities. In first grade, students focus on observing, measuring, and identifying properties. First grade science units cover themes such as:

- Organisms** ~ Students create a land and water habitat and observe both plant and animal life. Through studying the needs and characteristics of a variety of organisms, students are able to draw conclusions about how plants and animals are similar and different. Students learn to recognize the interdependence of the plant and animal world.
- Solids and Liquids** ~ Students investigate the similarities and differences in a variety of solids and liquids. They observe, describe, and compare materials based on properties such

as color, shape, texture, fluidity, and degree of absorption.

Science/Technology ~ Students use Legos building materials to construct simple machines.

Wetland Study ~ Students participate in a study of local wetlands. This study also integrates the creatures that inhabit them.

Spanish

In Grade 1, the students continue to develop a language understanding through repetition and imitative activities, developing sensitivity to basic intonation patterns of the Spanish language. Phonological and phonetic awareness will be introduced as well as the association of letter sounds and picture words. By associate sounds, pictures, letters and words they will have a clearer understanding of vocabulary previously learned.

Eventually they will receive their own textbooks that will help to reinforce their vocabulary and communication skills.

Spanish will be taught by singing Spanish folk songs, listening to stories and acting out activities in the retelling of a story, drawing pictures, memory games, and circle games that include gestures and exercises with hands, feet and fingers. The students will hear fairy tales told with pictures and sometimes with marionettes to better understand the meanings and nuances of the words. The students also prepare some crafts for the Spanish celebration of The Day of the Dead.

The first grade class curriculum honors the experiences and perspectives of different social groups, encouraging mutual respect, personal responsibility, cooperation, curiosity, creative thinking and problem solving skills; in mutual collaboration with their classroom teacher, we’ll be sharing topics and vocabulary to enrich the children’s learning.

The topics and vocabulary brought in each lesson block include:

- ~ Personal greetings and salutations
- ~ Body geography
- ~ Learning to express feelings and emotions
- ~ Classroom objects, size and colors
- ~ Alphabet letters and phonetic sounds
- ~ Recall basic vocabulary, including words focused on sustainability
- ~ Basic grammatical forms. A mi. Yo tengo, Yo no tengo
- ~ Listen to and follow simple Spanish instructions

~ Learn the names of more body parts, animals and parts of the house

~ Questions and negations

~ Introduce family member

~ Animals pets, zoo, ocean, insects

~ Reviewing the weather

~ Clothing in relation to the weather

~ Likes and dislikes

~ Food: fruits and vegetables

~ Recite and memorize everyday phrases

~ Name classroom objects

~ Continue work with articles, singular and plural forms

~ Use gender agreement when speaking

~ Talk about holidays in Spanish speaking countries

Technology

Teachers and students work together throughout the year integrating technology. Midway through first grade, students begin their very first project-based introduction to technology, which includes an investigation of a variety of age appropriate music, drawing, story telling, writing and voice, video and photo recording tools designed to draw out creativity, reinforce the curriculum and inspire inquiry.

Previous projects and investigations have included:

~ Created an iTunes original poetry e-book complete with digital photos and voice-readings with the author

~ Developed an awareness of oneself in relationship to the world with the Digital mosaic of me – an ever expanding understanding of myself, my neighborhood and my world

~ Exploration in creating music videos, rhythmic sound machines, cartoon stories, animated puppet shows and more

Learning Services

In 1st grade, children are learning to read phonetic and sight words, appreciating literature genres, mastering basic math addition and subtraction facts and concepts, expanding their academic and social vocabulary, practicing handwriting, and exploring early written expression. Learning Services supports the development of children with diverse learning styles, needs and abilities by providing:

~ Fall and spring comprehensive reading assessments

~ Differentiated reading groups for developing and strong readers in partnership with classroom teachers

~ Conceptual math enrichment

~ Curriculum support for teachers

~ Individualized screening and testing upon request

~ Resources, specialist referrals and conference support for parents

For an additional fee, one to one specialized instruction is also available in phonic and sight word reading, math facts and concepts, handwriting and early written expression using research-validated, structured curriculum. Learning specialists are available to attend parent/teacher conferences and provide ongoing progress reporting. Learning Service support is usually offered in lieu of Spanish.

Second Grade

The second grade child grows in competency in academic and social skills. Expectations are based on an understanding of individual development and learning styles. The student is supported in taking steps to be responsible for organizing his/her own time, and to be responsible for the care of the group environment and personal belongings. Mutual respect, understanding of the diversity of our society and its resources, and cooperation are encouraged.

An integrated curriculum is used in which various academic areas, visual arts, drama, physical education, science, music, Spanish, library skills, and technology are combined to explore specific concepts or units. Problem solving, thinking skills and practices to help build a sustainable future are interwoven into the curriculum.

CURRICULUM AREAS

Language Arts

Reading and writing are taught in a workshop environment. Each child is encouraged to find his/her own voice as a writer and discover his/her own interests as a reader. Children are exposed to a variety of literature, which reflect the diversity of our world today. Projects and class studies are designed to expand horizons and foster creativity and confidence in the student's ability to communicate. Most importantly, we try to develop a lifelong love and curiosity for reading and writing. Becoming literate is not solely based on one of these skills, but encompasses all of them.

For writing, students will be able to:

~ Produce a portfolio of writing that demonstrates their growth as a writer

~ Engage in activities that introduce them to the three text types: narrative, informational and persuasive

~ Be introduced to text structures and graphic organizers to begin their learning/ understanding of a prewriting process

~ Will produce and publish writing by planning, revising, editing, and rewriting.

~ With guidance, use technology to produce, publish and collaborate writing with others

~ Research to build and present knowledge based on focused questions

~ Show a range of writing, from short to longer pieces

Reading

Students will:

~ Develop phonemic awareness

~ Expand vocabulary development

~ Engage in sustained silent reading

~ Participate in class "Read Aloud" novels, author studies, and genre studies

~ Focus on reading comprehension strategies

~ Make inferences using information from text

~ Learn to use nonfiction books as research tools

~ Explain the problem, solution, or central idea of a piece of writing

~ Develop an appreciation of literature/ genres

~ Expand literature choices to include books from a multicultural perspective

~ Expand literature choices to include books promoting environmental stewardship

~ Develop reading fluency through book clubs and literature circles

Writing

Students will:

~ Write in a weekly journal

~ Complete a research project

~ Explore a variety of genres including fiction, nonfiction, and poetry

~ Emphasize writing as a process

~ Learn to follow a writing process and publish pieces throughout the year

~ Expand on individual ideas through the use of descriptive language and conventional writing practices

~ Learn to organize writing to include a beginning, middle, and end

~ Use descriptive details to elaborate on central ideas

~ Revise and edit writing for clarity, grammar, and developmentally appropriate spelling and punctuation

2 ART

2 DRAMA (12 weeks)

1 LIBRARY

2 MUSIC

2 PHYSICAL EDUCATION

2 SCIENCE

2 SPANISH

TECHNOLOGY (project-based)

CREATIVE MOVEMENT (project-based)

~ Move towards dictionary spelling of commonly used words

~ Learn high frequency words and letter patterns

~ Develop handwriting skills

Listening and Speaking

Students will:

~ Create and perform an original play

~ Learn and practice presentation skills

~ Share and listen to student-generated pieces

~ Improve communication skills

Mathematics

The goal of our daily math routine is to meet the needs of each student in the class through fluid math groups. The math work occurs through small group lessons, differentiated instruction, math stations, and jointly developed curriculum. Developmentally, children begin to move from concrete materials to more symbolic work. Students learn to solve problems, reason logically, communicate ideas, make connections, and understand concepts and procedures. The use of a variety of strategies, estimation, and mental mathematics is fostered. Our main program is EnVision Math, which uses manipulatives and pictorial models. Mathematics is taught daily. Mathematical concepts and procedures include:

Number and Operations

~ Understands place value to (at least) 1000

~ Knows addition and subtraction facts through 20

~ Solves arithmetic problems by applying knowledge of properties of number, properties of addition (cumulatively and

associatively), and models of addition and subtraction

~ Understands adding and subtraction of two and three digit numbers with regrouping

~ Estimates sums and differences and calculates them mentally

~ Understands concepts of multiplication and division

~ Has beginning fraction skills

~ Knows time to the hour, half hour and quarter hour

Measurement

~ Develop meaning of linear measurement as an iteration of units and use measurement tools with that understanding

~ Establish facility with measuring lengths and capacity (standard and metric) and weight

Algebra

~ Can successfully model situations that involve addition and subtraction of whole numbers using objects, pictures, and symbols

~ Can create and interpret graphs

~ Can use the Part-Part Whole method

Geometry

~ Able to recognize geometric shapes and structures in the environment

~ Compose and decompose two-dimensional shapes to develop foundation for understanding area, fractions, and proportions

~ Understands symmetry

~ Estimates, measures, and computes lengths as to solve problems involving data, space, and movement through space

Social Studies

We provide an opportunity for children to begin to expand their horizons to the world beyond themselves. The curriculum honors the experiences and perspectives of different cultural groups. Computers are used to enhance the unit of study, to delve deeper into subject matter, and to create projects that compliment thematic units. For example, in the Forest Explorers unit, students develop presentations about tropical and temperate rainforests and the animals that live there. They use books and the Internet for research. Then they build and give a presentation.

“Community” is the focus for second graders, including thematic units such as Pike Place Market and forest explorers.

Key Concepts:

~ The Pike Place Market provides valuable services to farmers and the community

~ The Pike Place Market is a community within a community

~ The market depends on people who are interconnected from around the world

~ Buying local and/or organic foods is beneficial to local communities and the environment

~ Diversity makes the world a more interesting and healthy place

History

Students will:

~ Study cultures and their local histories

~ Study the history of the Pike Place Market

~ Explore various cultures affiliated with rainforest environments

~ Recognize various family structures throughout our local communities and the world at large

~ Interview to gather firsthand information

~ Develop basic strategies to organize and communicate information about cultures around the world

Geography

Students will:

~ Develop an understanding of tropical and temperate forests and explore the plants and animals in each habitat and their interdependence

~ Visit forest environments in our area

~ Compare and contrast the ways different groups of people adapt to their environment and meet their basic needs

~ Be introduced to basic map skills through thematic concepts

Civics

Students will:

~ Honor the importance of local and organic foods

~ Donate proceeds from our school market to the Pike Place Market Foundation

~ Discuss human impact on forests and ways to practice conservation

~ Recognize a variety of family structures

~ Encourage empathy and respect for others

~ Create cohesiveness in the classroom by understanding individual gifts and needs

~ Demonstrate an understanding of good citizenship, including rights and responsibilities in one’s personal life as well as in the school community

Economics

Students will:

~ Create and run a market at school

~ Demonstrate an understanding of the interdependence of producers and consumers

Health

This study is designed to help students develop an understanding of healthy behaviors, including physical fitness, eating habits and safety. We teach the importance of getting enough sleep, eating right and exercising. We practice the proper way to cough, sneeze, and wash hands. Students learn to dress for the weather.

RESOURCE CLASSES

Art

Second grade students become more fluent in their art expression. They begin to master skills needed for more advanced work. Some projects refer to art history and students begin to develop an awareness of the work of artists from a variety of cultures. Art is integrated across disciplines and provides experience in a broad range of materials and processes.

In art, recycled materials are used widely, and conservation and respect for materials is emphasized. Students learn about artists and cultures that use recycled and found objects. Art can be a vehicle to express ideas and educate others about sustainability. Students will demonstrate competency by:

~ Combining geometric and organic shapes to build compositions

~ Identifying warm and cool colors

~ Creating space in artwork using the spatial devices of overlap and relative size

~ Recognizing that works of art have different styles

~ Demonstrating active listening and viewing skills

~ Learning how an idea can be represented through various arts disciplines

~ Applying previously learned arts concepts, vocabulary and skills

Drama

In addition to a review and deepened study of previously introduced elements and theory, second grade marks an introduction to the study of dramatic story structure, or The Well Made Play.

The following seven elements are introduced and explored: introduction, inciting incident, rising action, obstacles, climax, falling action, resolution, and dramatic question.

These elements are used to guide students through collaborative processes as the group works toward the development of their own original play. Students decide the environment, the problem, identify an antagonist and protagonist and vote upon a problem that the story can center around, establishing a “dramatic question.” With the support of an adult dramatist and scribe, an original work is developed in which students represent individual characters.

Another important set of skills second graders learn is how to record and track their own blocking and stage direction in their scripts. In addition, students are asked to design and build their own costumes at home, using recycled materials or used clothing.

Library

Second graders research and read about many topics including folktales, families, forests, butterflies, current events and global responsibilities. Organization of library materials is reviewed throughout the year, and students develop increasing independence in locating materials for both research and reading enjoyment. Time is spent:

~ Exploring various genres through story time

~ Identifying broader subjects and narrower subtopics

~ Becoming more independent in using the computer catalog

~ Using alphabetical order to locate information

~ Using the Table of Contents and the Index in nonfiction materials

~ Citing sources for reports

Music

Children are encouraged to develop their gifts both as individuals and as a part of the greater ensemble. Activities include following patterns,

listening to sounds, movement, clapping, and singing. The second grade student:

~ Understands the use of dynamics in music

~ Understands and hears timbre in instruments and voices

~ Understands beat and the duration of notes and rests

~ Understands basic harmony and makes it using different methods

~ Understands basic music forms

~ Appreciates and shares music

~ Identifies a variety of orchestra instruments

Physical Education

The Physical Education program aims to develop and enhance skills, coordination, and physical fitness in each child at every grade level. The overall program seeks to promote enjoyment of physical activity and lifetime habits of physical fitness for purposes of general health, wellness and strong sense of self. Second grade students are exposed to continued development of physical fitness, enhanced knowledge of physical fitness concepts, creative movement exploration, enhanced tumbling skills and concepts, continued development of manipulative skills, beginning focus on team game concepts such as offense and defense, and cooperative games and activities. They begin to explore more specific sports skills and more advanced concepts of physical fitness.

In all grade levels, the concept of environmental sustainability is addressed in a variety of ways. Students learn conservation skills by making their own equipment, such as hula hoops and juggling balls, and by repurposing materials that would otherwise be recycled or discarded. During Earth Week the students play games and activities that explore environmental concepts. We discuss carbon-neutral ways to travel and exercise.

The second grade physical education activities incorporate concepts and skills that encourage the students to:

~ Strengthen fitness components such as muscular strength, agility, balance and cardiorespiratory endurance through fitness activities and games that include running, dodging, leaping, jumping, and landing

~ Develop concepts of transferal of weight and inversion through a variety of animal movements and tumbling activities

~ Enhance static motor skills such as balancing, bending, swaying, twisting and turning

~ Integrate manipulative skills into group activities and team game situations

~ Follow rules of the game, deepen understanding of the concepts of sportsmanship and teamwork, and practice safety

~ Respect differences and cooperate with others through partner and group activities

~ Learn to work at own level, set goals for individual achievement, and identify own successes

~ Enjoy participation in physical activity

Robotics: Integrating Science, Technology and Engineering

Tinkering, coding and robot-based hands-on technology engages and motivates students in STEM concepts while equipping them with real-world knowledge and 21st century skills. Robotics at Bertschi provides an open-ended, challenge-based think lab, whereby students can design and refine ideas and bring those ideas to life.

Building on their experiences in robotics in first grade, Bertschi second graders are introduced to more advanced apps, which furthers their understanding of coding, logic and problem solving. With drag-and-drop programming tools, students use command sequences, control flow, conditionals, loops and sensors. Bertschi students enjoy a 1:1 robotics experience.

Students are also introduced to the newly released LEGO Education WeDo 2.0 software and materials to construct LEGO models with working motors and sensors. It provides an innovative way for students to model reality, conduct investigations and use design skills. The drag-and-drop interface allows students to bring their robotic creations to life while sharpening their computational thinking skills such as logical reasoning, pattern recognition and modeling simulations.

Science

Second graders build on the knowledge and skills acquired in first grade and continue to investigate scientific phenomena firsthand. They engage in activities that relate directly to their understanding of the world and are now ready and capable of recognizing patterns and cycles. Second grade science units cover themes such as:

Butterflies ~ Students investigate the concept of life cycles by investigating the Painted Lady butterfly. They compare the life cycle of the butterfly with that of other organisms, an experience that deepens their understanding of the diversity of life and the patterns that characterize animal life cycles.

Soils ~ Students investigate the chief components of soil and explore the relationship between soil and plant growth. They observe and learn about earthworms to discover their connection to plant roots and soil and their role in recycling our food waste.

Changes ~ Students expand their understanding of solids, liquids, and gases by exploring changes in state. They investigate freezing, melting, evaporation, and condensation of water.

Balancing and Weighing ~ Second graders explore the relationship between balance and weight. Using a fulcrum and beam, students discover how the amount, distance, and position of objects affect balance. They work with an equal-arm balance to understand the concept of a standard unit.

Spanish

The Grade 2 Spanish curriculum is designed to meet the student's developing needs for expressing self-awareness, as well as emphasize understanding of cultural traditions and customs from some Spanish speaking countries. The simple elements of the basic vocabulary learned in Grade 1 through imitation, gesture, and mime are continuously reviewed and become brief individual dialogues in Spanish with the teacher and within the group. The focus of second grade is to provide students with foundational grammar skills to continue language development and keep building on a well-rounded foundation and appreciation of languages for further study. The students will engage in conversations, expressing feelings and emotions, identifying people and objects based on descriptions, and demonstrating comprehension of written vocabulary.

The students experience Spanish language and culture through Spanish folk song, rhythmical rhymes, tongue twisters, acting out activities in the retelling of stories, drawing pictures, and playing circle games (using hands, fingers, feet), memory games, guessing and missing objects games, guest speakers (Daniel Beltra) (Fran Hayek). The topics and vocabulary brought in each lesson block are:

- ~ Classroom commands
- ~ Prepositions

~ Polite expression, questions and answers

~ The climate humidity, dryness, deserts. (Amazonia)

~ Reviewing seasons and weather

~ Reviewing days of the week

~ Plants, medicinal plants

~ Time and routines

~ Spatial directions

~ Reviewing house, house related terms

~ Reviewing family – extended members of the family

~ Opposites

~ City, public market, supermarket

~ Nouns recollection to create our own picture dictionary.

~ Basic conjugation forms- action verbs and pronouns

~ Mercado, legumes, fruits, vegetables—likes and dislikes

~ Counting from 0 to 100

~ Forming and answering simple questions

~ Listen to seasonal stories, animal fables.

~ Writing and reading

We will celebrate the Latin American holiday of Día de los Muertos by making paper flowers, drawing pictures, and singing songs.

Technology

Technology becomes a fundamental means in which teachers and students begin to perform daily tasks. Continuing with a scaffolded approach, building on first grade, second graders explore a number of new apps designed to broaden their understanding of technology as an integrated part of the curriculum. Usage of multiple apps to accomplish tasks deepens, with encouragement to know the right tool for the right task. The second grade integrated unit of inquiry brings together purposeful reading, lively discussion, meaningful research and wraps up in a multimedia presentation on animals. Typing is introduced at the end of 2nd grade, with access and practice encouraged outside of school. Second graders enjoy a 1:1 iPad program and devices are integrated into classroom time.

Previous projects and investigations have included:

~ Research based, graphical presentation on an animal of interest

~ Developed creative story telling with comic strip stories

~ e-books developed from original fictional stories complete with photos and voice readings

~ Begin to understand that technology can drive change: as in the MLK Walk for Awareness video

~ 2nd and 5th grade buddy project exploring the Ethnobotanical garden with iPads and QR code readers

~ Animated cartoon stories, animated puppet shows and much, much more

Learning Services

In second grade, children are mastering more complex vowel, consonant, and word family combinations, solidifying their sight word knowledge, recognizing familiar spelling patterns, building reading fluency, expanding math concepts and early problem solving abilities, learning basic sentence and paragraph structure, and expanding social skills.

Learning Services supports the development of children with diverse learning styles, needs and abilities by providing:

~ Fall and spring reading assessment

~ Differentiated decoding, fluency and strong reader groups in partnership with classroom teachers

~ Conceptual math enrichment

~ Curriculum support for teachers

~ Individualized screening and testing upon request

~ Resources, specialist referrals and conference support for parents

For an additional fee, one to one specialized instruction is also available in phonic and sight word reading, reading fluency, comprehension, math facts and concepts, handwriting, spelling, early written expression, study skills and homework support using research-validated, structured curriculum. Learning specialists are available to attend parent/teacher conferences and provide ongoing progress reporting. Learning Specialist instruction is usually offered in lieu of Spanish.

Third Grade

Students in the third grade continue to gain skills and confidence in working independently and responsibly. Third graders have opportunities to explore and organize information, identify problems, and test a variety of solutions. They are encouraged to be contributing members of classroom and school community. Students develop an awareness of sustainability through a unit on recycling and garbage. The curriculum honors the experiences, perspectives and contributions of different cultural groups. A cooperative, non-competitive approach to teaching is most frequently used, integrating subjects within the class and/or with resource classes when possible. Students learn a variety of skills to aid them in learning and presenting information about the world around them.

CURRICULUM AREAS

Language Arts

The language arts curriculum focuses on reading, writing, listening, and speaking. Students study setting, character, point of view, plot, climax, resolution and theme. Attention is given to skill development, understanding, and questioning. The connection between reading, writing, and listening is fostered. Students' writing develops on a continuum from well-constructed sentences, to paragraphs, essays and research projects. Self-directed students wishing to pursue topics of particular interest are guided in researching and completing optional independent reports.

Reading

The reading program fosters student enjoyment and appreciation of reading through relevant and meaningful interactions with many genres of literature, including those rooted in a variety of cultures. The program provides guided instruction to develop strategies that help students gain meaning from the text, become active participants in the reading process, become efficient with fluency, become aware of their own reading strategies, and respond to the text in meaningful ways. A variety of assessment tools are used throughout the year. These include teacher based, student based, and computer comprehension assessments, as well as informal observation.

Students will:

- ~ Read and discuss a variety of reading materials in small groups and as a whole class
- ~ Develop fluency and comprehension skill through literature circles
- ~ Develop strategies and skills for reading fiction and nonfiction including questioning, predicting, asking questions,

inferring, visualizing, finding information, comparing, retelling, decoding, and comprehension

~ Analyze words and develop vocabulary

~ Learn and practice study skills, note-taking, report writing, word-processing and presentation skills

~ Read a variety of materials including novels, reference materials, digital resources, and news magazines

~ Use reading skills with specific classroom topics of study

~ Learn to choose books at an appropriate level

~ Read independently during quiet reading periods and listen to stories read aloud

~ Record themselves reading aloud

~ Expand reading genres through creative book projects

Writing

Students at this age are learning to convey their thoughts clearly and organize their ideas logically. Students write in the persuasive, narrative and informational formats regularly. Writing occurs across content areas. Students are taught a process of writing as well as the mechanics of writing.

Utilizing text organizers, students' ideas are expanded upon during the pre-write stage of the writing curriculum. A proofreading and editing process, requiring input from other students as well as from the teacher, encourages discussion and revision prior to completion of the final version.

Final copies are created using technology or are written by hand and encapsulated within portfolios. Portfolios are used to set goals as well as reflect upon growth.

Students will:

- 1 ART
- 2 DRAMA (12 weeks)
- 1 LIBRARY
- 2 MUSIC
- 2 PHYSICAL EDUCATION
- 2 SCIENCE
- 2 SPANISH
- TECHNOLOGY (project-based)
- CREATIVE MOVEMENT (project-based)

~ Write in a variety of forms throughout the year, expressing themselves through stories, letters, narratives, persuasive pieces, poetry, script writing and research projects to a variety of audiences

~ Write compositions of varying length ranging from short journal writes to multi-week projects

~ Plan, write a first draft, confer, revise, edit, and publish a final copy

~ Write compositions sorted into paragraphs with a beginning, middle and end

~ Review manuscript handwriting and learn cursive through instruction and regular practice

~ Strengthen keyboarding and word processing skills

~ Develop proficiency with spelling and language mechanics using a variety of texts and a spelling program

~ Increasing accuracy of high-frequency spelling words

~ Research topics using the Internet, library, and other sources

~ Take notes, write reports, and give presentations

~ Develop word choice to include colorful, descriptive language

~ Demonstrate comprehension of independent reading through written book projects

~ Produce a portfolio of writing that contains writing samples from each type of writing (narrative, persuasive/argumentative, and informational) as well as samples that span the spectrum of the Bertschi Writing Process

Speaking and Listening

Through guided instruction, students develop skills with communication, following directions and conflict resolution.

Students will:

- ~ Discuss news events, including social, cultural and environmental issues
- ~ Make a variety of presentations to the class
- ~ Share thoughts and ideas about interpersonal situations using the Virtues Project curriculum
- ~ Take part in an annual drama production
- ~ Participate in classroom meetings focusing on student agenda items
- ~ Express thoughts and listen actively in a variety of groupings
- ~ Use technology for creating and sharing presentations

Mathematics

The math program places emphasis on problem solving as well as computational fluency. Students work individually, with a partner, or in flexible groups across the grade often employing manipulative materials and technology. Various forms of on-going assessments are used to meet students at their “just right” math level. A solid working knowledge of the basic facts is developed. EnVision Math is the primary text used, but third graders also use various tools to support their learning as they build foundational understanding. Numerous enrichment activities take the form of differentiated math stations, hands on learning, written explanation of learning, logic and problem solving strategies and puzzles.

Content includes:

Numbers and Operations

- ~ Developing understanding to decimal place value to hundredths and expanded notation and place value to 1,000,000
- ~ Build facility with mental computation by using computational estimation and using paper and pencil strategies
- ~ Developing understanding of math facts through easy multiplication and division
- ~ Using a variety of solution strategies, students relate multiplication and division as inverse operations
- ~ Knows addition and subtraction with regrouping using four-digit numbers

~ Develops ability to identify fractional parts, uses fractions to represent parts of a whole, parts of a set, or points or distances on a number line

Algebra

- ~ Developing the ability to find patterns on number grids
- ~ Build conceptual understanding with the use of the Hands on Algebra curriculum

Geometry

- ~ Beginning to identify, draw and label segments, lines, rays, and angles while identifying symmetry
- ~ Beginning to identify parallel and intersecting lines
- ~ Investigate, describe, and reason about decomposing, combining, and transforming polygons to make other polygons

Measurement

- ~ Can tell time to the nearest minute
- ~ Measure and analyze data connected to the sustainability unit
- ~ Develop facility in measuring with fractional parts of linear units
- ~ Knows how to measure to the nearest $\frac{1}{4}$ inch and whole centimeter
- ~ Select appropriate units, strategies, and tools to solve problems involving perimeter

Data Analysis and Probability

- ~ Developing ability to predict outcomes and discuss probability
- ~ Able to construct and analyze frequency tables, bar graphs, picture graphs, and line plots

Problem Solving

- ~ Developing ability to learn and practice specific problem solving strategies

Technology Integration

- ~ Use of Excel, various math fact applications, the on-line EnVision supports as well as others are regularly availed of

Social Studies

The approach to the social studies program is a broad, interdisciplinary one often enhanced through technology. The students continue to learn about relationships with each other, people of their community, and the world as they expand their global awareness. In third

grade, students get involved in, discuss, and problem solve local issues of sustainability focusing on garbage, compost and recycling. Students develop ideas and formally present findings and suggestions to the entire student body. Social studies is integrated with reading, writing, discussion, and experiential activities.

History

Students will:

- ~ Study and compare cultures
- ~ Study key events in Seattle history
- ~ Compare and contrast lifestyles of people in ancient civilizations, including local Native Americans, with their own lifestyle
- ~ Demonstrate a basic understanding of chronology
- ~ Use a variety of forms to communicate knowledge of historical concepts
- ~ Engage in guided Internet research
- ~ Refine researching and presentation skills using technology

Geography

Students will:

- ~ Learn map skills and map features: key, compass, symbols, scale, hemispheres, prime meridian, latitude, and longitude
- ~ Locate major Seattle landmarks
- ~ Define city, state, country
- ~ Undertake a country study using nonfiction research and technology, and construct a PowerPoint project
- ~ Research, analyze and present findings of ongoing garbage, recycling and compost unit
- ~ Use basic geographic terminology including equator, hemisphere, and prime meridian
- ~ Use a simple letter/number grid system to locate specific places on a map

Civics

Students will:

- ~ Recognize similarities and differences
- ~ Discuss stereotypes, prejudice, and discrimination through the use of the Virtues project
- ~ Participate in developing class rules
- ~ Develop democratic group decision-making skills
- ~ Participate in community service activities

~ Recognize rights and responsibilities of citizens in school and in the city

~ Study individuals who made significant contributions to the United States and the world

Health

In addition to health related topics, lessons guide students in further developing social and emotional skills.

Students will:

- ~ Learn and practice basic hygiene, basic first aid, and handling emergency situations
- ~ Learn, discuss and practice empathy, interpersonal problem solving, and anger management skills

RESOURCE CLASSES

Art

Art is integrated across disciplines and provides experience in a broad range of materials and processes. Our hope is to develop learners who consider themselves artists, understand the language of art, make connections between art and other areas such as sustainability, and develop skills and creative processes to solve problems. Third grade students’ skill level and art knowledge increases and so does the complexity of their work. Imagination and originality are encouraged as children’s expressive skills expand.

Art can be a vehicle to express ideas and educate others about sustainability. In art, recycled materials are used widely and conservation and respect for materials is emphasized. Students learn about artists and cultures that use recycled and found objects. Students will demonstrate competency by:

- ~ Beginning to undertake drawing exercises and learning how to create illusion of volume, shading/value, and perspective
- ~ Using line to create detail
- ~ Applying arts knowledge and skills to reinforce learning in other content areas such as environmental awareness
- ~ Recognizing that aesthetic choices are influenced by culture and history
- ~ Using texture in two or three dimensional work
- ~ Applying previously learned arts concepts, vocabulary, skills and techniques
- ~ Increased group collaboration and individual work in two and three dimensional media

Drama

Third grade drama includes a detailed review and reincorporation of ideas presented from pre-k through second grade. In their third grade drama studies, students will explore themes from ancient cultural mythology or folklore.

Students are asked to take an active role in researching character, historical periods and more, through the use of the Internet and historical, mythical or folkloric literature. Often the plays include stories of creation myth, and character ranging from human to mythological monsters.

Expanded use of physical storytelling, and vocal expression are required to bring these myths and monsters to life. Sound and slides can be used to create story or environment. Most costumes, sets and properties created are built from recycled materials, and reused or sent home for further use by students after production closes.

Continued study revolves around some of the themes and ideas below:

- ~ Representation of realistic or mythical characters from history
- ~ Increased focus on the Audience/performer dynamic
- ~ Exploration of character through character relationships
- ~ Introduction of tactics and objectives
- ~ Introduction of status
- ~ Memorization
- ~ Expanded vocabulary and theory
- ~ Working to achieve individual and group goals toward common good
- ~ No adult narration or presentation; plays are totally student driven

Library

Students become increasingly independent in catalog searching and in use of print and online reference tools. Research subjects include Seattle history, Native Americans, plants and animals, and multi-cultural explorations. This age group is often conducting independent research and is guided in the use of databases, websites, magazines, and a variety of nonfiction texts to locate information. The class’s focus on consumption and waste provides a topic for information seeking exercises. Additionally, students will:

- ~ Recognize appropriate sources for information problems

~ Create bibliographies

~ Identify genre characteristics of fantasy, science fiction, and mystery

~ Locate library materials independently

~ Read within and beyond their identified interests

Music

Music is indeed the universal language. Learning music involves a wide variety of instructional techniques. Third grade students will:

- ~ Sing independently, on pitch and in rhythm, with appropriate timbre, diction, and posture, and maintain a steady tempo
- ~ Identify by genre or style aural examples of music from various historical periods and cultures
- ~ Improvise “answers” in the same style to a given rhythmic and melodic phrase
- ~ Devises criteria for evaluating performances and compositions
- ~ Echoes short rhythms and melodic patterns
- ~ Understands the treble clef and improves on the ability to sing and play instruments
- ~ Music appreciation and sharing

Physical Education

The Physical Education program aims to develop and enhance skills, coordination, and physical fitness in each child at every grade level. The overall program seeks to promote enjoyment of physical activity and lifetime habits of physical fitness for purposes of general health, wellness and strong sense of self. Third grade students are exposed to tumbling skills, creative movement exploration, yoga, physical fitness activities, manipulative skills, game concepts, and cooperative games and activities. The third grade program builds upon their previous introduction to individual and team sport skills and integrates these skills into modified games. The students focus more on physical fitness and learn about their body in relation to sport and physical activity.

In all grade levels, the concept of environmental sustainability is addressed in a variety of ways. Students learn conservation skills by making their own equipment, such as hula hoops and juggling balls, and by repurposing materials that would otherwise be recycled or discarded. During Earth Week, the students play games and activities that explore environmental concepts. We discuss carbon-neutral ways to travel and exercise.

The third grade physical education activities incorporate concepts and skills that encourage the students to:

~ Enhance manipulative skills for integration into sport-specific games

~ Further develop individual sport skills such as juggling, jumping rope, climbing, tumbling, and yoga

~ Strengthen skills specific to traditional and non-traditional sports such as basketball, football, soccer, Ultimate Frisbee, hockey, volleyball, lacrosse and baseball

~ Integrate sport-specific skills into individual and partner non-competitive activities, as well as team games and activities

~ Develop an understanding of how fitness activities benefit their bodies, wellness and performance

~ Explore the relationship between sports and physical activity and own bodies, including studies of bones, joints, muscles, the heart, the brain and nutrition

~ Follow rules of the game and play fairly, develop a deeper understanding of the concepts of sportsmanship, teamwork and integrity, and play safely

~ Respect differences of ability and style of play and cooperate with others through partner and group activities

~ Learn to work at own level, set goals for individual achievement, and identify own successes

~ Enjoy participation and develop lifelong habits of physical activity

Integrative Design: Science, Technology and Engineering

Collaborative science and technology projects, focusing on design thinking principles, begin in the third grade and scaffold, in complexity and depth, through the fifth grade.

Bertschi provides open-ended, design-based challenges, whereby students can brainstorm, prototype and implement ideas, bringing those ideas to life.

Engineering, science and technology easily lend themselves to the cyclical design process, where students are encouraged to dream, try creative solutions and then revise their plans as necessary. Tinkering, coding, logic and reasoning skills are used to teach core engineering and science concepts. For

Bertschi students, robotics is merely a vehicle providing first hand experiences solving authentic, real-world challenges. Integrative design can incorporate a wide range of technologies, including squishy fabrics, Arduino, and MIT Media Lab's Makey Makey. Regardless of the technology being utilized, at its core, the design process emphasizes creative and collaborative problem solving.

Science

Third grade students refine and develop their skills and work independently as well as cooperatively to do investigations. They ask questions, make and test predictions, record, reflect on and share their findings. Other areas of the elementary curriculum such as reading, writing, math, and social studies are incorporated by providing students with opportunities to read stories about topics that they are studying in class. Third grade science units cover themes such as:

Plant Growth and Development ~ Students observe and record each stage in the life cycle of the Wisconsin Fast Plant. Students cross-pollinate the flowers with dried honeybees to focus on the interdependence of living things.

Rocks and Minerals ~ Students explore the differences and similarities between rocks and minerals by investigating samples of these earth materials and performing tests on them. They also read about how rocks and minerals are used.

Chemical Tests ~ Students are introduced to chemistry by investigating and determining the identity of five common household chemicals. Students begin by focusing on the physical properties of color, form, and texture. Next, they explore chemical properties by observing how the five powders interact with water, vinegar, iodine, and red cabbage juice.

Motion and Design ~ Students use K'NEX to explore the physics of motion and then apply these concepts to technological design. They test how fast the vehicles move and use their findings to redesign the vehicles to move more efficiently and reduce their cost.

Spanish

In Grade 3 the students begin to experience a progression of the qualities of 'identity' and 'criticalness,' permitting their respective personalities to come forth. The student generates their own expressions, adding to what they have previously learned in the first and second grades of elementary Spanish. The class continues to be in the oral, reading and writing forms. Grammatical aspects start to strongly emerge for the students during

the lessons - nouns, adjectives and verbs. The Spanish curriculum will also invite the students to do activities that connect them to the world of ancient civilizations from Spanish speaking countries Inca (Peru), Maya-Azteca (Mexico), Tyrone-Muisca (Colombia). They will maintain a correspondence communication with a school in Peru (Ausangate Bilingual School) and in Seattle with (Zoom Bilingual School).The students will keep learning through Spanish songs, reciting poems, listening to stories, retelling of the stories, drawing pictures, memory games, guessing games, tongue twisters, and exercises with their hands, feet and fingers. The students will also be able to describe their own physical characteristics, recognize cultural practices, and identify aspects of different cultures that are not present in their own environment.

The students also participate in the Spanish celebration of the 'Dia de los Muertos' by drawing and making papel picado flags, paper flowers, and sugar skulls. They will present a dance from Peru. The block lessons include:

~ Continued review of classroom commands and prepositions

~ Reviewing house room in the house

~ Daily routines, domestic chores, recycling, composting, garbage

~ Calendar, days of the week

~ Inca and agriculture, kipu counting system

~ Maya and games

~ Aztec hair styles

~ Review numbers, counting 2's, 5's and 10's

~ Read simple math exercises (addition, subtraction, division and multiplication)

~ Tell time

~ Home, school, city, restaurant

~ Conjugation

~ Read, write and understand complete short sentences

~ Understand: word gender, number, agreement between articles, nouns and adjectives in a sentence

~ Create and play games in Spanish

~ Create and work on word searches and participate in word game

~ Review vegetables, fruits, grains, trades, occupations

~ Expansion in forming questions and answers

The Spanish seasonal stories are varied and include:

~ [Summer] El Día que el Perro Dijo ¡Quiquiriquí! and Pulgarcito y Sus Hermanos

~ [Autumn] Los Tres Cerditos y el Lobo, El Ratón de Campo y el Ratón de la Ciudad, and El Burro y el Cerdo

~ [Winter] El Labrador y la Providencia, Medio Pollito, El Gallo, el Cerdo y el Cordero; and La Mesa, el Asno y el Bastón Maravilloso

~ [Spring] El Chivo en la Huerta de Hortalizas, El Caballito de Siete Colores, El Cultivo del Maíz, Los Huevos de Oro, Música Para la Vaca, La Lechera, El Chivo de los Montes y las Montañas, and Las Tres Hilanderas.

Culinary Experience: cook tamales and papas rellenas at Señora Romero's home.

Technology

By third grade, students see a daily integration of technology across all curricular areas. The third grade integrated unit of inquiry is rooted in Seattle History and highlights critical thinking, collaborative work and extensive research that leads students to create media rich, deep projects. Integration comes from across the board, including map projects in Art, period music from Music, photos and experiences from field trips and movie making skills to wrap it all together. Complementing the integrated project, students utilize Google apps and Google Classroom to collaborate and work on a variety of topics and tasks. Throughout the year, 3rd graders work towards becoming responsible digital citizens. Students strive to become better, more consistent typist using home row, while continuing to increase their speed and accuracy. 3rd grade is the first year where students benefit from a 1:1 laptop program.

Previous projects and investigations have included:

~ Research based, movie presentation on Seattle History with in-depth archived images, authentic music integrated from the music specialist, re-enacted videos shot on location at numerous Seattle historic sites and a Seattle neighborhood map created with the art specialist.

~ Independent research projects have included the freedom to create movie documentaries. Examples include interviewing and investigating future careers, the process of blood donation and extreme sports utilizing green screen technology

~ Digital Citizenship

~ Develop concise methods for using search engines, beginning video editing and production skills

Learning Services including Academic Extension

In third grade, students are transitioning from learning to read to reading to learn, establishing silent reading fluency, distinguishing literature genres, developing research skills, beginning to use paragraphs to organize ideas, enhancing writing with more expressive verbs and adjectives, beginning to edit for standard

punctuation and grammar, learning cursive, refining addition and subtraction fluency skills, solving basic multiplication, division and story problems, developing fundamental algebra and geometry concepts, and applying social skill problem solving. Learning Services supports the development of children with diverse learning styles, needs and abilities by providing:

~ Fall and spring reading assessment

~ ERB testing accommodations and support

~ ProReader nonfiction fluency and comprehension classroom unit

~ Hands On Equations algebra classroom unit and mathematical problem solving units

~ Curriculum support for teachers

~ Individualized screening and testing upon request

~ Resources, specialist referrals and conference support for parents

For an additional fee, one to one specialized instruction is also available in reading decoding and fluency, comprehension, math facts and concepts, spelling, writing (grammar, sentence, paragraph, research skills), study strategies and homework support using research-validated, structured curriculum. Learning specialists are available to attend parent/teacher conferences and provide ongoing progress reporting. Learning Services support is usually offered in lieu of Spanish.

Fourth Grade

In fourth grade, students continue to grow in independence, responsibility, confidence, and open-mindedness. They are encouraged to further develop positive feelings about themselves and their own ideas, as well as to respect others, the ideas of others, and the differences of others. In a cooperative atmosphere, students have opportunities to explore information, to think critically, and to make decisions based on learned information. Subjects are integrated, when possible, by combining academic areas and the arts to focus on concepts and specific areas of study in greater depth. Students work in groups or individually and are expected to develop self-motivation, efficient time management, and organizational skills. Sustainability and technology are integrated in various curriculum areas.

CURRICULUM AREAS

Language Arts

Students in fourth grade are in a new stage of reading and learning. Traditionally, fourth grade marks the transition from learning to read to reading to learn. This stage can be categorized as reading and learning for life, a stage in which students begin to acquire and apply a full and complex range of lifelong language and literacy skills. From fourth grade on, students must be able to recognize increasingly complex words accurately and automatically in grade-level text and materials ranging from classical literature to online information. They must also develop their vocabulary knowledge and skills in more sophisticated ways, including through their own research and by reading informational texts in fourth-grade content areas.

Students in fourth grade use all stages of the writing process—prewriting, drafting, revising, and editing—to produce clear, coherent writing suited to the purpose and audience and a portfolio to document stages and progress. Students develop proficiency in each type of writing (narrative, persuasive/argumentative, and informational) by having opportunities to practice their writing, receive feedback and serve as editors to one another. Connections between reading and writing are fostered. They learn about the links between reading different types of text structures and writing using those same structures, drawing on what they have read as examples of how to write. Our literature integrates human issues and provides substance for discussion and projects stimulating students' awareness of the world-at-large. Laptops are regularly used for writing projects. Library books, additional literature, and research materials supplement the program.

Reading

Students will:

- ~ Develop word analysis skills, including prefix, suffix, root words, syllables, and phonics
- ~ Expand vocabulary using context, parts of speech, synonyms, antonyms, dictionary skills, meaning of prefixes and suffixes, and idioms
- ~ Identify details of main idea or theme
- ~ Actively engage in peer-led literature circles
- ~ Make inferences and predictions
- ~ Understand literary elements such as genres, plot, character, and setting
- ~ Understand similes, metaphors, and exaggeration
- ~ Know the difference between nonfiction and fiction
- ~ Use skills of skimming, scanning, summarizing, identifying cause and effect, sequence
- ~ Develop research skills including use of the table of contents, index, and sources such as the atlas, encyclopedia, textbooks, and the Internet
- ~ Recognize fact and opinion
- ~ Read a variety of genres, including poetry

Writing

Students will:

- ~ Write opinion pieces on topics or texts, supporting a point of view with reasons and information
- ~ Write informative/explanatory texts to examine a topic and convey ideas and opinions

1 ART

2 DRAMA (12 weeks)

1 LIBRARY

2 MUSIC

2 PHYSICAL EDUCATION

2 SCIENCE

2 SPANISH

TECHNOLOGY (project-based)

CREATIVE MOVEMENT (project-based)

- ~ Write narratives to develop real or imagined experiences or events using descriptive details and clear event sequences
- ~ With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing
- ~ With guidance and support from adults, use technology, including the Internet, to produce and publish writing
- ~ Organize thoughts into a clear beginning, middle, and end
- ~ Use transitional sentences and phrases to connect ideas
- ~ Apply conventions of spelling, grammar, sentence structure, punctuation, capitalization, and paragraphing
- ~ Demonstrate ability to write in a variety of text types (poems, narrative, informational, argumentative)
- ~ Understand and use the steps of the writing process: pre-write, draft, revise, edit, and publish
- ~ Develop fluent and legible cursive handwriting
- ~ Develop word processing skills including typing, formatting, and layout
- ~ Produce a portfolio of writing that contains writing samples from each type of writing (narrative, persuasive/argumentative, and informational) as well as samples that span the spectrum of the Bertschi Writing Process

Speaking and Listening

Students will:

- ~ Develop oral presentation skills including eye contact, volume of voice, rate of speech, and good posture
- ~ Contribute to discussions

~ Give oral reports

~ Participate in drama performances

~ Take notes while listening

Mathematics

Mathematics in fourth grade is designed to provide a rich variety of cognitively appropriate strategies and resources so that all students have opportunities to experience both success and challenge. Teachers will encourage and assist students to develop into mathematical thinkers, collaborative participants, effective communicators, innovative problem solvers, and self-directed achievers. Teachers will vary the level and pace of instruction to meet the students' needs. Across grade flexible grouping, forming classrooms so that students of similar ability are together, will be used throughout the year. Students learn to solve problems, reason logically, communicate ideas, make connections, and understand concepts and procedures. Students become proficient in basic computational skills and procedures, develop conceptual understandings, and become adept at problem solving. The use of a variety of strategies, estimation, and mental math is fostered. Basic facts, problem solving, and real life math situations are emphasized and involve sustainability when possible. Our primary math text is enVision math, but manipulative materials, projects, activities, and games are also used to enhance conceptual learning.

Content includes:

Numbers and Operations

- ~ Understand place value of whole numbers to millions
- ~ Learn to use decimals as equivalencies to fractions, compare and order decimals, and estimate decimal or fraction amounts in problem solving
- ~ Add, subtract, multiply and divide whole numbers and decimals
- ~ Identify the relationship between decimal and fraction
- ~ Simplify fractions
- ~ Develop quick methods of recall for basic math facts

Algebra

- ~ Recognize and predict patterns
- ~ Solve simple equations with unknowns

Geometry

- ~ Identify polygons and circles

~ Identify simple 3-D shapes

~ Uses coordinates

~ Identify parallel and perpendicular lines

~ Recognize, measure and classify angles and produce line and rotational symmetry

~ Design and analyze transformations through tessellations

~ Construct circles and some polygons using a compass

Measurement

~ Calculate area, perimeter and volume of simple shapes

~ Measure (using correct units) money, length, area, volume, weight, capacity, and temperature (metric and standard)

Data Analysis and Probability

- ~ Create and understand graphs, tables, line plots, and charts
- ~ Recognize probabilities and predict outlines
- ~ Identify minimum, maximum and range

Problem Solving

- ~ Organize and manipulate relevant data
- ~ Choose appropriate strategies to solve problems

Social Studies

Fourth grade studies include Washington state, water, religions, and global geography. In Washington, the focus is on the geography, history, government and economics of the state. In collaboration with the science teacher, the sustainable use of water is considered with regard to water supply and disposal, and competing uses of water in the state, focusing on the needs of salmon. Students study five major world religions: Judaism, Islam, Hinduism, Buddhism, and Christianity. In each case, consideration is given to history, traditions, geography, arts and culture. Issues pertaining to stereotypes and prejudice are discussed. An integral experience is visiting a house of worship for each religion. In collaboration with technology, students will create Public Service Announcements to promote stewardship and responsible management of water in order to help the survival and perpetuation of salmon. Students will also create and present slideshows, transform spreadsheet data into graphs and interpret them, advance their word processing skills, and use of the Internet for research for compiling and creatively displaying information

about Washington state. Work includes discussions, reports, and special projects. Resources, which help develop concepts, include texts on Washington State, a news magazine, field trips, videos, reference books and online references. Other areas of the curriculum include current events and map studies. The fourth grade Service Learning project will focus on the care of waterways. Students will team up with Mountains to Sound Greenway Trust and participate in a volunteer event for one day.

History

Students will:

- ~ Explore key events of state history and development from pre-Columbian times to the present
- ~ Compare and contrast the lives of the plateau and coastal Indians in the pre-Columbian times
- ~ Study early explorers of land and waterways
- ~ Identify the contributions of influential Washingtonians, including minorities and women in the past and present

Geography

Students will:

- ~ Understand how environment affects culture
- ~ Define watersheds
- ~ Recognize and use physical and political maps
- ~ Recognize and use key and scale
- ~ Identify the geographic regions of Washington and learn how the geography of each region influences the lifestyle and economy of its people
- ~ Describe how different groups of people have adapted to the climate and environment of Washington

Civics

Students will:

- ~ Understand that Washington is comprised of many cultural groups
- ~ Identify the main parts of the state government
- ~ Discuss current events, including local, national, and international news
- ~ Use the democratic process to solve problems and make decisions in the classroom

~ Consider issues of civil rights and social justice

~ Understand civil rights and citizen responsibilities

Economics

Students will:

~ Understand the basic elements of the state's economy

~ Identify the life cycle and environmental needs of salmon

~ Discuss the role of technology in Washington's economic development and its effect on the environment

~ Identify Washington's economic interdependence with other states and countries

Health/Life skills

Social and emotional health issues and skills are addressed throughout the year through discussions and activities. We use the Virtues program to help support the understanding of social relationships and feelings.

RESOURCE CLASSES

Art

Our hope is to develop learners who consider themselves artists, understand the language of art, make connections between art and other areas such as sustainability, and develop skills and creative processes to solve problems. Fourth grade students refine the skills developed in previous art classes and may undertake more sophisticated projects such as charcoal drawing, print making and photography. Some projects are completed in one class period while others are refined over a longer period of time. Art is integrated across disciplines and provides experience in a broad range of materials and processes. The students will work through increasingly complex projects that introduce concepts at a time that is developmentally appropriate and foster learning. In art, recycled materials are used widely, and conservation and respect for materials is emphasized. Students learn about artists and cultures that use recycled and found objects. Art can be a vehicle to express ideas and educate others about sustainability. Students will demonstrate competency by:

~ Defining space using horizon/ground line, foreground, middle ground and background

~ Identifying and making color values, tints/shades, monochromatic color schemes

~ Identifying and demonstrating symmetrical and asymmetrical balance in two and three dimensions

~ Producing detailed imagery in a variety of media

~ Appreciating attributes of artworks used by specific artists and cultures, including recycled art

~ Applying previously learned arts concepts, vocabulary, skills and techniques through a creative process

Drama

Fourth grade drama studies entails a detailed review and reincorporation of ideas presented from pre-k through third grade, including a deeper exploration of realism, and representation of human characters in historical, cultural or classical dramatic story occur. Often a classical work of literature, such as an adapted work of Shakespeare, is chosen for students to study and perform. Characters increase in complexity and script length expands. An expanded study of detailed use of actor's tools, the incorporation of rhythm, and a deepened study of tactics and objectives, as well as character relationships, plot and tension occur. In addition, performances expand to 50–60 minutes, and scripts contain expanded vocabulary, often written in prose or Old English language. Sound, slides or other technical elements may be added for story or effect. Most costumes, sets and properties created are built from recycled materials, and are reused or sent home for further use by students after production closes. Topics covered include:

~ Character research

~ Audience performer dynamic

~ Character development and relationships

~ Detailed study of tactics and objectives

~ Self and group evaluation

~ Vocal, physical, and emotional exploration

~ Memorization

~ Vocabulary

~ No adult narration; student driven typically 50–60 minutes

Library

Independent research is a frequent activity for fourth graders; many materials will go to their classrooms during a particular unit of study, though students may continue to use

library time to locate supplemental materials for individual projects. Resources for the class relate to world religions, Washington state geography and history, sustainability in architecture, awareness of global issues, and salmon. Use of reference materials is reviewed and students are given guidance in seeking information on the Internet, determining the value and appropriateness of a website, downloading material, and citing sources. Search strategies are practiced and discussed.

Skills include:

~ Locating and using nonfiction materials

~ Reviewing citation form and need for citation

~ Composing logical search strategies for research

~ Assessing appropriateness of possible resources (Internet searches included)

~ Reviewing and "booktalking" books read

~ Reading within and beyond identified interests

Music

Children are encouraged to explore varying aspects of musical expression. The fourth grade student:

~ Sings from memory a varied repertoire of songs representing genres and styles from diverse cultures

~ Performs in groups, blending instrumental timbres, matching dynamic levels

~ Explains, using appropriate music terminology, personal preferences for specific musical works and styles

~ Identifies the sounds of a variety of instruments, including orchestra and band instruments from various cultures, as well as children's voices and male and female adult voices

~ Understands fundamentals of recorder playing

~ Music appreciation and sharing

Physical Education

The Physical Education program aims to develop and enhance skills, coordination, and physical fitness in each child at every grade level. The overall program seeks to promote enjoyment of physical activity and lifetime habits of physical fitness for purposes of general health, wellness and strong sense of self. Fourth grade students are exposed to physical fitness development, creative movement exploration, manipulative skills,

game concepts, and cooperative games and activities.

The fourth grade program continues to explore and reinforce individual and team sport skills, and integrates these skills into modified games. The students increase their focus on physical fitness by learning about nutrition and their bodies (body type, bones, muscles, heart and brain) in relation to sport and physical activity.

In all grade levels the concept of environmental sustainability is addressed in a variety of ways. Students learn conservation skills by making their own equipment, such as hula hoops and juggling balls, and by repurposing materials that would otherwise be recycled or discarded. During Earth Week, the students play games and activities that explore environmental concepts. We discuss carbon-neutral ways to travel and exercise.

The fourth grade physical education activities incorporate concepts and skills that encourage the students to:

~ Enhance manipulative skills to develop more sport-specific skills

~ Continue to develop and refine individual sport skills such as juggling, jumping rope, climbing, tumbling, and yoga

~ Strengthen skills specific to sports such as basketball, football, soccer, Ultimate Frisbee, hockey, volleyball, lacrosse and baseball

~ Integrate sport-specific skills into individual and partner non-competitive activities, as well as team games and activities

~ Develop a more complex understanding of how fitness activities affect their body, enhance their performance and contribute to general wellness

~ Explore the relationship between sports and physical activity and the body, including studies of body type, bones, joints, muscles, the heart, and nutrition

~ Follow rules of the game and play fairly

~ Develop a deeper understanding of the concepts of sportsmanship, teamwork, and integrity

~ Balance their competitive drive with practice of safe and respectful play

~ Respect differences of ability and style of play and cooperate with others through partner and group activities

~ Learn to work at own level, set goals for individual achievement, and identify own successes

~ Enjoy participation and develop lifelong habits of physical activity

Robotics: Integrating Science, Technology and Engineering

Collaborative science and technology projects, focusing on design thinking principles, begin in the third grade and scaffold, in complexity and depth, through the fifth grade.

Bertschi provides open-ended, design-based challenges, whereby students can brainstorm, prototype and implement ideas, bringing those ideas to life.

Engineering, science and technology easily lend themselves to the cyclical design process, where students are encouraged to dream, try creative solutions and then revise their plans as necessary. Tinkering, coding, logic and reasoning skills are used to teach core engineering and science concepts. For Bertschi students, robotics is merely a vehicle providing first hand experiences solving authentic, real-world challenges. Integrative design can incorporate a wide range of technologies, including squishy fabrics, Arduino, and MIT Media Lab's Makey Makey. Regardless of the technology being utilized, at its core, the design process emphasizes creative and collaborative problem solving.

Building upon the Robotics Continuum, in both depth and complexity, fourth graders at Bertschi go deeper with the Lego Mindstorm EV3 robot. Sensors are an integral part of making a robot, and students are challenged to go beyond basic coding by incorporating sensors to take in their environment. Creativity, ingenuity and problem solving rise to the surface as students use logic structures and sensor feedback to tackle challenges. Bertschi students enjoy a 1:1 robotics experience.

Science

By fourth grade, students can identify cause-and-effect relationships and are able to apply the skills and knowledge they have gained to new situations. As a result of conducting many investigations in first through third grades, students have improved their scientific skills. They are able to observe and record results, form conclusions on the basis of experience, communicate results and apply their knowledge to solve problems. Once again, science investigations provide a natural transition to literacy as students read stories about topics that they are studying in science class. Fourth grade science units cover themes such as:

Salmon ~ Students study the life cycle of the salmon by setting up and maintaining a salmon aquarium. They investigate the relationship between a healthy, clean watershed and the survival of our salmon. Students release their salmon in the spring.

Animal Studies ~ Students care for and observe animals from different habitats. They learn what animals need to survive, the primary parts of their anatomical structure, and the ways in which they are suited for life in a particular environment. Fourth graders perform a number of investigations and gather data into a spreadsheet and graph results.

Land and Water ~ Students investigate the interactions between land and water by using a stream table as their model. The stream table also serves as a basis for investigations of the water cycle.

Electric Circuits ~ Students are introduced to the basic properties of electricity as they learn about electric circuits and the parts of the light bulb. They also explore different kinds of circuits, learn about switches, construct a flashlight, and investigate the properties of diodes.

Human Body ~ Students observe and investigate the human skeletal and muscle systems, becoming aware of the versatility of movement provided by an articulated skeleton. They build mechanical models to demonstrate how muscles are responsible for human movement. They also acquire the vocabulary associated with the human skeletal and muscle systems.

Floating and Sinking ~ Students investigate the phenomenon of buoyancy. This unit emphasizes the unifying concepts of evidence, models, and measurement. Model building allows students to engage in the process of technological design.

Spanish

Through the first three grades, the Spanish language is taught through gestures and mime, choral speech work, Spanish folk song, poetry, and circle games. In Grade 4, the basic parts of Spanish speech learned and memorized by the students in the previous years are crystallized in formal reading and writing form. By starting to read material with which the students are already familiar orally, the students begin to establish a solid base in their reading. This process also facilitates good pronunciation. The students begin to form their own mental pictures of what they are to write in their compositions. In this year it is important, through the discovery of the importance of grammatical rules, to lay the foundation for

grammar principles and awaken capacities for approaching the more conceptual aspects of grammar. The students learn to recite stories with strong rhythms (alliteration) and explore the cadence of the Spanish language through songs, verses, tongue twisters, puzzles, bingo and lottery games. Students engage in conversations, providing and obtaining information, expressing feelings and emotions, and exchanging opinions. Students study vocabulary lists and conjugate verbs. They will have some informal tests and quizzes.

The students will work individually and in groups. Reviewing vocabulary in the form of dictations, dialogues, and art projects. Oral work is supplemented with the use of picture dictionaries and classroom textbooks. The topics to be learn in this grade are:

- ~ Exchange greetings and express how they are feeling
- ~ Provide information about the objects they see in the classroom
- ~ Students tell and talk about days of the week, months and seasons
- ~ Describing the weather
- ~ Engaging in conversations by using phrases and commands associated with their routines
- ~ Indefinite and definite articles
- ~ Singular and plural
- ~ Parts of speech, emphasizing noun and adjective gender
- ~ Animal kingdom
- ~ Naming Spanish speaking countries and finding them in a map
- ~ Pre Hispanic religions
- ~ Math additions, subtractions
- ~ Stories from different Latin-American regions, such as The Kingdom of the sun and the moon. Cuando el Sol y la Luna Eran Niños (Mito Chatino); Como Nació el Arco-iris (Mito Zapoteca).

The students also participate in the Spanish celebration of the 'Día de los Muertos', making drawings, Mexican flags, papel picado, cards, and sugar skulls.

Culinary Experience: a lunch trip to La Cantina Mexican Food at the north end of Broadway!

Technology

Technology in fourth grade is highly integrated into their daily workflow. Students utilize Google apps and online services that bring

the once insular student work experience into a safe, collaborative, environment where constructive feedback and shared responsibility augment the learning. Students work on several deep areas of focus, including World Religions, Water and Food Trucks and throughout each, technology is embedded. Throughout the year, 4th graders also work towards becoming responsible digital citizens. Typing practice becomes an essential part of class as most assignments now require word processing. Students extensively utilize their laptops on a daily basis, benefiting from the 1:1 laptop program.

Previous projects and investigations have included:

- ~ Students collaboratively wrote, produced and filmed public service announcements on salmon and water rights using iPads, HD cameras and green screens
- ~ Students authored a class movie highlighting the religions of the world
- ~ Independent research projects have included the freedom to create movie documentaries. Examples include interviews with individuals famous in their field, movies showcasing cooking, science and innovative uses of technology
- ~ Digital Citizenship

Learning Services

In fourth grade, students are reading and writing for a variety of different purposes, recognizing plot and implied main ideas, expanding their use of more complex vocabulary in writing, editing for standard grammar, spelling and paragraph organization, practicing research skills by generating essays and reports, solidifying math facts, expanding their knowledge of algebra, geometry, probability and problem solving, and mastering more complex social interactions. Learning Services supports the development of children with diverse learning styles, needs and abilities by providing:

- ~ Fall and spring reading assessment
- ~ ERB testing accommodations and support
- ~ Hands On Equations algebra classroom unit and mathematical problem solving units
- ~ Greek and Latin word study unit
- ~ Curriculum support for teachers
- ~ Individualized screening and testing upon request
- ~ Resources, specialist referrals and conference support for parents

For an additional fee, one to one specialized instruction is also available in reading decoding and fluency, comprehension, math facts and concepts, spelling, writing (grammar, sentence, paragraph, research skills), study strategies and homework support using research-validated, structured curriculum. Learning specialists are available to attend parent/teacher conferences and provide ongoing progress reporting. Learning Services support is usually offered in lieu of Spanish.

Fifth Grade

The fifth grade program is intended to guide students toward becoming increasingly broad-minded in their outlook, skilled, confident, and independent in their work. They are encouraged to feel positively about themselves as citizens in a global community and their responsibilities to do their part as good stewards of our planet. We instill in them the belief system that every individual can make a difference. They are expected to respect and appreciate others. Development of social skills is enhanced through day-to-day problem solving, class meetings, and service learning projects. To all these ends, we use a cooperative, non-competitive approach to teaching. The integration of subjects receives high priority.

CURRICULUM AREAS

Language Arts

The fifth grade Language Arts program is designed to guide students to become successful, motivated, confident readers, writers, and communicators. Reading, writing, thinking, speaking, and listening are integrated throughout all areas of the curriculum. In fifth grade, activities become more independent and self-directed. Attention is given to skill development, understanding, and questioning. In written communication, students practice various types of writing, with increasing attention to producing thoughtful and well-edited papers. Literature circles comprise a significant part of the reading program. Whole group novel studies integrate note-taking, quiz preparation and the study of vocabulary and literary device. They also provide a foundation for the use of the Socratic Seminar discussions. The core-spelling curriculum is based on Spelling Connections, Zaner-Bloser. This program groups high frequency writing words into sound families and provides opportunities to use these words in multiple settings.

Reading

Reading is an important part of the student learning process. A daily reading program is provided which is eclectic in its methods. Students may receive instruction individually and in small groups, as well as in whole-group situations. Whenever practical, there is a silent free-choice reading period approximately three days each week for 15–20 minutes. A variety of reading materials is incorporated, including trade books, reference materials, periodicals (Time Magazine for Kids), and newspaper articles that deal with a variety of issues. Books and articles promoting

global awareness are an integral part of the curriculum. Reading is encouraged as a self-initiated activity for pleasure and personal

growth. Attention is paid to understanding and questioning what is read, to skill development and word analysis, particularly through our literature circles. Understanding and use of vocabulary is constantly developed. Reading is associated with specific classroom topics of study.

Students will:

- ~ Read, respond to, and evaluate literary forms, including fiction, nonfiction and poetry
- ~ Further develop research skills
- ~ Enjoy and appreciate great literature that embraces many diverse cultural ideas
- ~ Read about fictional characters and real people from a variety of cultures and backgrounds who have experienced various forms of adversity
- ~ Read with understanding and empathy about issues surrounding diversity

Writing

Fifth grade represents the culmination of the Bertschi Writing Curriculum. Fifth grade is the year where students begin to fine tune and solidify the independent use of previously introduced skills and concepts such as the use of the Bertschi Writing Process (frontloading, planning, drafting, revising, editing and publication). This process is captured and used for reflection in a writing portfolio. Students develop proficiency in each type of writing (narrative, persuasive/argumentative, and informational) and are challenged to support their opinions with facts and their narratives with rich detail. Students will be given ample opportunity to practice their writing, receive feedback and serve as an editor. The writing program draws much of its content from literature and social studies units. The writing process regularly involves input from other students, as well as from the teacher, and

- 1 ART
- 2 DRAMA (12 weeks)
- 1 LIBRARY
- 2 MUSIC
- 3 PHYSICAL EDUCATION
- 2 SCIENCE
- 2 SPANISH
- TECHNOLOGY (project-based)
- CREATIVE MOVEMENT (project-based)

encourages discussion and rethinking prior to completion of the final copy.

Students will:

- ~ Explain their understanding of specific concepts or processes
- ~ Produce writing that represents each type of writing (narrative, persuasive/argumentative, and informational)
- ~ Follow the Bertschi Writing Process, which includes frontloading, planning, drafting, revising, editing and publication
- ~ Understand that organization and conventions are part of the process
- ~ Edit for clarity, spelling, grammar, capitalization, and punctuation
- ~ Use computers for word processing and publishing and practice appropriate uses of spell and grammar check
- ~ Use language mechanics skills taught in context, as well as in workbook exercises
- ~ Write a biographical sketch about a person who represents diversity and has contributed to society, overcoming significant adversity
- ~ Write a research paper on a selected country, with preliminary steps of reading, extensive note taking, and outlining
- ~ Employ word processing as an alternative to writing by hand (technology instruction in the fall includes keyboarding and word processing for the purpose of speed and accuracy)
- ~ Reinforce word study, grammar and vocabulary through class activities, writing assignments, oral reports, performance, public speaking, meaningful contributions to group discussion, current events presentations, and group problem-solving exercises

~ Produce a portfolio of writing that contains writing samples from each type of writing (narrative, persuasive/argumentative, and informational) as well as samples that span the spectrum of the Bertschi Writing Process.

Speaking and Listening

Students will:

~ Continue to develop understanding of usage of vocabulary

~ Develop oral presentation skills such as eye contact, voice, rate of speech, and good posture

Mathematics

The 5th grade math program is varied in focus and strives to challenge students in developmentally appropriate ways. Our program strives to engage the students so they enjoy the process of mathematics and appreciate the subject. Students work alone, in small groups, and in between-class groups. Frequent assessments along with individual and small group work keep the teacher apprised of student progress and understanding. Teachers will differentiate methods, levels and pace to meet the needs of students. This is accomplished through between-class groupings that aim to create “just right” groups where students receive instruction commensurate with their learning style and sensitive to an appropriate balance between challenge and success. Such groupings are meant to be fluid so that students can be moved based on their level of skill, competence and aptitude with given math concepts. Our primary math program is EnVision Math. Supplementary materials including manipulative items and additional developmentally appropriate work to meet individual needs are used to solidify and enhance conceptual understanding. Enrichment activities take the form of art-related design projects, constructions, games, pattern work, problem-solving strategies, puzzles, and technology projects.

Core content includes:

Numbers and Operations

~ Understands place value, models for division and the relationship between division and multiplication through millions and millionths

~ Demonstrates an understanding of multiplying and dividing fractions, decimals, percents and landmark statistics

~ Understands and can use standard algorithms

~ Forms ability to choose the most useful form of quotient for the solution, and interpret it correctly

~ Able to add, subtract, multiply and divide fractions and decimals

~ Able to multiply and divide large numbers involving multi digit dividends

Algebra

~ Can search to function rules, write and solve equations with inequalities

~ Create line graphs of equations

~ Explore prime and composite numbers, use factors and multiples as they add and subtract fractions

Geometry

~ Identifies properties of 2-D and 3-D figures, polygons and angles

~ Understands perpendicular lines and congruencies

~ Relates two to three dimensional shapes and quantifies volume

~ Use area formulas of shapes to solve problems

Measurement

~ Understands basic units of length, weight, capacity, volume, and temperature

~ Estimates and makes precise measurements in standard and metric units using protractors and rulers and develops strategies for estimative calculations

Data Analysis and Probability

~ Predicts outcome

~ Understands the concept of probability

~ Collects and organizes data

~ Learns how to interpret statistics from graphs, charts, and tables

Problem Solving

~ Solves word problems using a variety of operations

~ Applies specific problem solving strategies

Social Studies

The approach to the social studies program is a broad, interdisciplinary one. It includes reading, writing, discussion and technology, and includes multi-cultural experiences within World Geography. Special projects include

study of another nation using the five themes of geography, a family ancestry project, an exploration of the similarities and differences between Martin Luther King Jr. and Beowulf, and finally a playing of the World Peace Game. Students share bi-weekly current news, articles often sparking discussions that broaden students’ horizons and illustrate multiple perspectives on today’s important diversity and environmental issues. Specific 5th grade environmental issues comprise an entire unit on energy and sustainability. Students learn how energy is used at Bertschi and about the resources that provide that energy. They explore the impact associated with using different energy resources. They participate in a school project that increases awareness of energy use and energy waste on campus. Notable aspects of the 5th grade program are the service learning projects, both in and outside of Bertschi. Fifth graders are peer teachers for their second grade buddies.

History

Students will:

~ Research and write a report on the life of an ancestor

~ Compare and contrast the life and work of Martin Luther King, Jr. and the literary hero, Beowulf

Geography

Students will:

~ Examine another country using the five themes of geography (location, place, human-environment interaction, movement, region)

~ Use a variety of resources and geographic tools to gather, interpret, and begin to evaluate information from geographic data

~ Manipulate elements such as scale, latitude, and longitude to create maps

~ Acquire understanding of concepts and terminology of physical and human geography

Civics

Students will:

~ Engage in geopolitical simulation (World Peace Game) to learn diplomacy, negotiation, problem solving, the consequences of one’s actions and gain a greater sense of the world outside the US

~ Understand environmental issues and how they impact the world

~ Increase awareness of world news and events

~ Summarize, present, and discuss current events

Health/Life Skills

Social and emotional health issues and skills are taught on a regular basis throughout the entire school year through discussions and activities. We stress the value of showing empathy for others’ emotional experiences, recognizing physical signs that may be associated with physical stress, and learning how people react differently to the same situation. Students are taught to acknowledge, accept, and honor the differences among us. Students also learn about physical safety, fitness, and nutrition. In addition, a comprehensive study of nutrition is taught in conjunction with the science teacher. An in-depth puberty unit is taught in the spring.

Camp

Each year, the fifth grade class spends part of a week in a sustainable camping experience, celebrating nature and our interdependence with one another, living things, and the earth.

RESOURCE CLASSES

Art

Art is integrated across disciplines and provides experience in a broad range of materials and processes. Our hope is to develop learners who consider themselves artists, understand the language of art, make connections between art and other areas such as sustainability and develop skills and creative processes to solve problems.

Fifth grade students continue to polish their skills and to explore the elements of art through increasingly complex projects. Some projects are completed in one class period while others are refined over a longer period of time.

The fifth grade students’ final group project is to create a piece of art that is permanently installed on campus as their departing gift. Media used for this project may include a variety of materials such as recycled materials, tile (mosaic), wood, metal, clay, and glass. In art, recycled materials are used widely, and conservation and respect for materials is emphasized. Students learn about artists and cultures that use recycled and found objects.

Art can be a vehicle to express ideas and educate others about sustainability. Students will demonstrate competency by:

~ Identifying specific attributes of artworks of various artists, cultures and eras, using arts vocabulary

~ Recognizing and using spatial devices to create volume, depth, and perspective

~ Expressing feelings and communicating through art

~ Enjoyment and appreciation of art through critique and self-assessment

~ Applying previously learned arts concepts, vocabulary, skills and technique through a creative process

Drama

Fifth graders experience a detailed review of all previous theory and ideas. Increased involvement in script development, and dramatically heightened production values are incorporated into the curriculum. The fifth grade project, hosted off campus, typically consists of an hour-long performance including elements of drama, music and dance and highlighting a theme of study taken from the fifth grade curriculum. The installation of the project in a traditional theater setting allows for a maximum exploration of both onstage and off stage etiquette, self-motivation and group commitment. In addition, all of the traditional technical elements used in the genre are incorporated into the production. Most costumes, sets and properties created are built from recycled materials, and are reused or sent home for further use by students after production closes. Students work on:

~ Character research

~ Audience performer dynamic

~ Introduction to working in a professional theatrical setting

~ Incorporating lights, sound and scenery

~ Character journey/story

~ Tactics and objectives

~ Character relationships and status

~ Memorization

~ Incorporation of song and dance

Library

Fifth grade students investigate topics such as energy, immigration, the Holocaust, Japanese-American internment, multicultural traditions and ecosystems. Laptop computers are used to instruct students in seeking online information, determining the value and appropriateness of a website, downloading material, and citation of sources. More complex search strategies are discussed, and reliable information sites for children are explored.

Part of the first term class time is spent reading a book that has been nominated for

the Young Readers’ Choice Award. Children are encouraged to read these independently and vote for their choices in the spring. Short stories, folklore, poetry, mythology, and nonfiction works continue to be shared. Interested fifth graders may participate in our library assistant program, helping for a brief time each week. Time is spent reviewing and reinforcing:

~ Locating materials in libraries and via the Internet

~ Selecting books for personal reading or research

~ Taking notes and citing sources accurately

Music

Literature includes folk and composed music of the United States as well as of other cultures and lands. The fifth grade student:

~ Understands the use of dynamics in music recognizing the musical forms of themes

~ Sings accurately and with good breath control throughout the student’s singing range, alone and in small and large ensembles

~ Recognizes dynamics in a piece of music, and can name them in greater detail

~ Read at sight, simple melodies in the treble clef

~ Echoes a given syncopated pattern accurately

~ Understands beat and the duration of notes and rests in more depth and can make it in many ways

~ Understands basic harmony

~ Understands more complex music forms

~ Develops soprano recorder skills, and plays with increasing accuracy and musical sensitivity

~ Integrates music skills in the year-end drama production

~ Music appreciation and sharing

Physical Education

The Physical Education program aims to develop and enhance skills, coordination, and physical fitness in each child at every grade level. The overall program seeks to promote enjoyment of physical activity and develop lifelong habits of physical fitness for purposes of general health, wellness and strong sense of self. Fifth grade students are exposed to a strong focus on understanding the components of physical fitness, development of physical fitness, continued

development of manipulative skills, team game concepts and strategy, and cooperative games and activities.

The fifth grade program reinforces and further explores individual and team sport skills, and integrates these skills into modified games. The students expand their knowledge of physical fitness by learning about the components of physical fitness and continuing to learn about nutrition and their bodies (body type, bones, muscles, brain and heart) in relation to sport and physical activity.

In all grade levels the concept of environmental sustainability is addressed in a variety of ways. Students learn conservation skills by making their own equipment such as, hula hoops and juggling balls, and by repurposing materials that would otherwise be recycled or discarded. During Earth Week, the students play games and activities that explore environmental concepts. We discuss carbon-neutral ways to travel and exercise.

The fifth grade physical education activities incorporate concepts and skills that encourage the students to:

~ Further improve manipulative skills to develop more sport-specific skills

~ Continue to develop and refine individual sport skills such as juggling, jumping rope, climbing, tumbling, and yoga

~ Further strengthen skills specific to sports such as basketball, football, soccer, Ultimate Frisbee, hockey, volleyball, and baseball

~ Integrate sport-specific skills into individual and partner non-competitive activities, as well as more competitive team games and activities

~ Develop a more complex and deeper understanding of how fitness activities affect the body

~ Explore the relationship between sports and physical activity and the body, including studies of fitness components (speed, agility, balance, flexibility, strength), body type, bones, joints, muscles, the heart and nutrition

~ Follow rules of the game, play safely, and become responsible competitors who model good sportsmanship and teamwork

~ Respect differences of ability and style of play and cooperate with others through partner and group activities

~ Develop the practice of working at own level, while goals are set for individual

achievement without comparing performance to others, and identify successes

~ Explore a variety of ways to maintain physical fitness throughout their lives such as running, walking, biking, hiking, yoga, dance, individual and team sports, multi-sport events and races such as triathlons, non-traditional sport such as Ultimate Frisbee and fencing

~ Enjoy participation in physical activity and develop lifelong habits of physical activity

Robotics: Integrating Science, Technology and Engineering

Collaborative science and technology projects, focusing on design thinking principles, begin in the third grade and scaffold, in complexity and depth, through the fifth grade.

Bertschi provides open-ended, design-based challenges, whereby students can brainstorm, prototype and implement ideas, bringing those ideas to life.

Engineering, science and technology easily lend themselves to the cyclical design process, where students are encouraged to dream, try creative solutions and then revise their plans as necessary. Tinkering, coding, logic and reasoning skills are used to teach core engineering and science concepts. For Bertschi students, robotics is merely a vehicle providing first hand experiences solving authentic, real-world challenges. Integrative design can incorporate a wide range of technologies, including squishy fabrics, Arduino, and MIT Media Lab's Makey Makey. Regardless of the technology being utilized, at its core, the design process emphasizes creative and collaborative problem solving.

Culminating their experiences in robotics, Fifth graders at Bertschi are challenged to push their coding skills, innovation and creativity to the limit. Robot challenge courses reflect those seen at First Lego League, NREC (National Robotics and Engineering Center) at Carnegie Mellon and the DARPA World Robotics Competition. Students can expect collaboration, communication, time limits and intense problem solving puzzles with an open-ended solution. Bertschi students enjoy a 1:1 robotics experience.

Science

Fifth graders have developed more sophisticated scientific skills. They are able to identify their assumptions, use critical and logical thinking, and consider alternative

explanations. By fifth grade, students can design and conduct their own controlled experiments. Once again, each science unit provides a variety of literacy methods and materials that give students opportunities to practice their reading skills and improve their reading comprehension. Fifth graders develop not only their reading skills but also their writing, speaking, and listening skills as they complete record sheets, maintain science journals, and share findings with their classmates. Fifth grade science units cover themes such as:

Microworlds ~ Students examine everyday objects as well as microorganisms with a variety of magnifying devices. They learn to how to use a compound microscope and examine the cell structures of a variety of organisms.

Ecosystems ~ Students set up a terrarium and an aquarium. By connecting the two to create an ecocolumn, students are able to observe the interdependent relationship between the two environments and the organisms living within them.

Food Chemistry ~ Students explore basic concepts related to food and nutrition. They set up their own classroom laboratory and perform physical and chemical tests to identify the presence of starch, glucose, fats, and proteins in common foods.

Magnets and Motors ~ Students build on the knowledge that they gained in the fourth grade Electric Circuits curriculum. Fifth graders explore the properties of magnets and the magnetic properties of electric currents. This unit includes information on the historical development of scientists' understanding of the use of magnetism, electricity, and electromagnetism.

Astronomy ~ Students study our solar system. Field trips to the Pacific Science Center and Museum of Flight contribute to developing an appreciation and understanding of astronomy.

Energy ~ Students investigate ten energy sources by researching where they come from, whether they are renewable or nonrenewable, how we use them, and how they affect the environment. Fifth graders study three kinds of renewable energy more closely, namely solar, wind and hydroelectricity.

Spanish

In Grade 5 the students start to learn dialogue using more grammatical forms and language structures than in previous years. The understanding of the content in a lecture or a passage that the students have first heard or read is demonstrated through description

and re-telling. A new level of attention is paid to reading aloud with proper pronunciation. Formal grammar exercises focus on nouns, adjectives, verbs and adverbs in their sentences, and conjugating with pronouns of present and past tense verbs. Students learn to identify both singular and plural, and masculine and feminine.

The foreign language lessons support mastery of basic content, sentence formation, and linguistic expressions, which are exercised with more frequency as the mind's instincts evolve into skills. The students begin to apply correct grammar in their writing and conversations, continuing to develop vocabulary and mastery with recall. Written and oral quizzes are used as a reinforcement of skills and vocabulary. Homework is introduced in this grade, and will become increasingly important as a tool of practice and review of class work.

Participation in the Spanish celebration for 'Día de los Muertos' included making a sawdust carpet, an altar, doing Mexican dance, and small storytelling. The lesson content consists of:

~ Poems about growth and nature

~ Writing simple and grammatically correct sentences; negative, positive and interrogative forms

~ Tell practical classroom phrases

~ Adverbs

~Telling time

~ Math addition, subtraction and basic times tables

~ Descriptions (family, extended members of the family, pets)

~ Descriptions about daily routines

~ City, market and restaurants

~ Naming foods and beverages, food groups and food pyramid

~ Provide information describing foods, fruits, vegetables, likes and dislikes

~ Spanish cooking

~ Possessives

~ Small group conversational Spanish

~ Review a variety of action verbs and numbers

~ Conjugations

~ Writing compositions and letters.

Stories from different Latin American regions are told, such as El Dorado. Los Conquistadores y sus caballos.

Technology

Utilizing everything students have learned at Bertschi, 5th graders can elect to use graphics, music, video and integrate, edit and create a digital project that uniquely represents themselves and their family. Technology in fifth grade is highly integrated into their daily workflow. Students utilize Google apps and online services that bring the once insular student work experience into a safe, collaborative, environment where constructive feedback and shared responsibility augment the learning. Throughout the year, 5th graders also work towards becoming responsible digital citizens. Laptop integration is tightly interwoven into the curriculum and the daily schedule, including projects, classwork and assignments require significant typing. Typing practice becomes an essential part of class as most assignments now require word processing. Students extensively utilize their laptops on a daily basis, benefiting from the 1:1 laptop program. Students begin to understand how the tools for technology integrate together and they are often given freedom of choice in Independent Research Projects and class assignments that incorporate technology. 5th graders often show the highest degree of creative expression in multi-modal, digital formats. Previous projects and investigations have included:

~ Highly individualized, personal account telling their "story" through words, pictures, video, music and anything else possible

~ Independent research projects have included producing, writing and creating original music CD's in the Audio Lab, filming rap videos and re-enacting historic plays for video

~ Created live-action comics entirely in Spanish with the Elementary Spanish Specialist

~ Digital Citizenship

Learning Services

In fifth grade, students are reading and writing in a variety of genres; recognizing main ideas and supporting details; expanding their use of more complex vocabulary in writing; editing for standard grammar; spelling and paragraph organization; refining research skills by generating essays and reports; fluently applying math facts; expanding their knowledge of algebra, geometry, measurement, probability and problem solving; mastering more complex social interactions; and transitioning to middle school expectations. Learning Services supports the development of children with

diverse learning styles, needs and abilities by providing:

~ Fall and spring reading assessment

~ ERB and ISEE testing accommodations and support

~ Hands-On Equations

~ Greek and Latin word study unit

~ ISEE Test Prep optional class (additional fee, offered after school in the fall)

~ Curriculum support for teachers

~ Individualized screening and testing upon request

~ Resources, specialist referrals and conference support for parents

~ Middle school transition support

For an additional fee, one to one specialized instruction is also available in reading decoding and fluency, comprehension, vocabulary development, math facts and concepts, spelling, writing organization and essay production, study strategies and homework support using research-validated, structured curriculum. Learning specialists are available to attend parent/teacher conferences and provide ongoing progress reporting. Learning Specialist support is usually offered in lieu of Spanish.