Boston Schoolyard Initiative

Mather School — 2009
1. **School Name:** Mather Elementary School  
**Address:** 1 Parish Street, The Meeting House Hill in Dorchester  
**Neighborhood:** Dorchester, off Bowdoin, Adams and East St.  
**Grade Levels:** Kindergarten 1 to Grade 5.  
**# of Students:** 580

2. **Name and Title of Contact Persons:**  
Ms. Emily Cox, School Principal — 617-233-4949  
Ms. Karyn Stranberg, Assistant Principal — 617-635-8757  
Martha Kempe, Art Teacher — 617-635-8757  
Dr. Anamarija Frankic, UMASS Boston — 617-287-4415

3. **School Description and Demographics:**  
The Mather Elementary School sits on Dorchester’s historic Meeting House Hill. Founded in 1639, the Mather is the first FREE public school in America. The existing school building was built in 1904 and designed by the prominent architect, Ralph Adams Cram.

Today, the Mather is a very diverse school with 580 students. 33.1% of our children are Vietnamese; 45.4% are black comprised of African Americans, West Indians, Cape Verdeans and Haitians; 15.5% are Hispanic, mostly Dominican; 3.4% are white and 2.6% are of other races. Approximately 80% of our children live in walking distance of our school and reflect the cultural, racial and socioeconomic makeup of the surrounding community. More than half of the students speak English as a second language and up to 85% receive free or reduced lunch. We have five classrooms per grade level. These include a Vietnamese Sheltered English Immersion class and a special education class per grade level from K1 to 5. We see our children as a multilingual, multi-cultural, multiracial and multi-talented young generation.

4. **Parent and Community Participation:**  
As a school, we have been able to build and develop meaningful working relationships with members of the community and parents alike.
Community Partners

The Mather has several community partners. We are currently working with First Parish Church to develop a student friendly document that explains the history of the hill on which the church and school reside and the historic relationship between the two in that the Mather was founded by the church’s Puritan parishioners. Also, we have a fruitful collaboration with Anamarija Frankic, Assistant Professor of Environmental, Earth and Ocean Sciences at UMass Boston. Dr. Frankic is a community member of our school council, as she lives in the neighborhood. Through her initiative and organization we had Boston Shines for three years in our local sites. Our partnerships also include the BELL Foundation which provides an on site after school program for 150 of our students, and the Log School which provides on site English as a Second Language evening classes for up to 25 parents, twice a week. In addition, we have been working with the Spring Brook Farm where we send 25 of our students on an annual trip to experience learning through working with domestic animals and small crops on the farm.

Members of the Northeastern University’s Nutrition Program (Five a Day) work with our children and families to improve their awareness and education of eating healthy foods. Thirty of our students are tutor by thirty girls from the Winsor High School every Wednesday. In our SCORES soccer program, thirty of our students are trained in soccer and in writing. Our partnership with Sports4Kids has resulted in establishing a volleyball and basketball team of students who compete with other schools. Sports4Kids has also trained fifth graders to serve as junior coaches to work with the full time coach in managing structured activities during recess.

Families

Our families are very much engaged at the Mather. We have a large and diverse representation of parents on the School Site Council and a very active and involved Parent Council. On average, 250 plus families attend our Open House, Literacy Night, Math Night, and Movie Night. Families are kept abreast of school events via monthly principal newsletters, phone calls (i.e. phone trees and Connect Ed Messages), flyers and monthly calendars. Flyers and calls are translated in Vietnamese and Spanish.

Involving Families and Friends in the Initiative

Our effective and fruitful collaboration with families and community based organizations is the core strength for the Mather Elementary School to see the project through. This place made a difference in the past and we are hoping that our initiatives will bring a safer and more beautiful environment in this part of Dorchester. The first town meeting ever held in this country was held at the First Parish Church, Meeting House Hill. In the last several years, the Meeting House Hill area has been improving mainly due to the continuous work of local communities and support from friends and neighbors.
This project will strengthen this collaboration and prove that vision and hard work make changes. Parents have been and will continue to submit their ideas for the development of the new school yard. In order to recognize the complexity of our community from all over the world, we count on volunteers to contribute good planting strategies and demonstrate traditional small farming practices from their countries in the designated part of the future school yard landscape. An important part of the project is to select indigenous plants and trees of the Dorchester area, and the Dorchester Historical Society members will serve as horticultural consultants to help in this task. Our community partner, Dr. Anamarija Frankic, has presented the possibility of creating a ‘field classroom’ as part of the school yard landscape that will present the connection between the school environment and the near by coastal environments (Malibu Beach and Dorchester Harbor). It would be a small educational site for kids to learn about the relationship between people and the watershed where we live. This approach will not only beautify the landscaping of the school yard, but also teach children why to choose certain plants and trees, where to plant them, and the importance of water and the ocean in our lives. In addition, our students will participate in field trips to the greenhouses in Wellesley College, (another partner), Franklin Park, and UMass Boston as they learn about the process of planting and different plants and trees.

Since last year, we have been collaborating with our parents and various community based organizations to generate support, ideas and resources for this initiative. Please see the attached letters of support. The principal, school specialists and community members have met on several occasions regarding the school yard initiative. As a team, we have discussed ideas around an environmentally friendly school yard that supports the interdisciplinary nature of classroom instruction including the arts, science, physical education, and social studies that align with both the state and citywide learning standards.

The principal has been meeting with Professor Frankic and Jody Morris, who is a retired teacher, school volunteer and Master Urban Gardener, BNAN, in order to prepare this project proposal based on inputs from the school, parents and community members. The head custodian of the Mather, Bill Utley has also taken part in two of our meeting to share ideas and discuss how he and his custodial team will help to maintain the grounds.

5. Organizing a Group to Oversee Planning, Implementing and Sustaining:

Ms. Emily Cox, the principal, has informed staff and families of the School Yard Initiative efforts at a whole staff professional development meeting, a School Site Council Meeting and a Parent Council Meeting. Potential partners have been called and notified. Several individuals have expressed an interest in supporting this effort using their time and expertise. They include: Mrs. Martha Kempe, the school’s Art Teacher, Mrs. Jody Morris, a retired teacher and a Master Urban Gardener, BNAN, Dr. Anamarija Frankic, professor at the UMass Boston and a Meeting House Hill resident, Ms. Karyn Stranberg (Assistant Principal), Mrs. Ann Marie Buckley, science teacher, and the principal herself. In jumpstarting the planning efforts for this initiative, this core group has collaborated
in providing lots of input in the writing of this proposal, spearheaded by the principal. The result will be a master plan for a school yard
that will not only beautify the school but provide numerous ways of outdoor education and present the neighborhoods with a better
way of using the environment that we live in, share and own. We also believe that with a beautiful landscape and cleaner environment
we can contribute to a safer and peaceful today and tomorrow. This group was responsible for initiating and planning this project, and
will be the core team to see to the implementation and sustaining of the school yard.

6. Committed School Yard Committee Members (see attached letters and signatures):
   The School Yard Committee Coordinator will be the school’s principal, if that is acceptable by the grant rules. If not, Mrs.
   Martha Kempe, the Art Teacher, is willing to serve as such. Ms. Morris, the Urban Gardener, has also mentioned her willingness to
   serve as the coordinator and collaborate with Mrs. Kempe.

   ➢ Attached Letters of Support from Committed Partners:
     These include letters from members of our Parent Council, Reverend Lavoie of First Parish Church, District Fire Chief C.
     O’Donnell of District 7 Boston Fire Department, Reverand Daniel Finn of St. Peter’s Rectory on Bowden St., Marchelle
     Raynor, Program Director of Gertrude E. Townsend Head Start Learning Center on Geneva Avenue and Curator Elaine
     Croce-Happne of the Dorchester Historical Society.

7. Budget:

   Coordinator/s (300 hours) 7,500 total
   Printing, Copies and Mailings 300
   Telephone In kind
   Meeting Room In kind
   Grounds Clean up Barbecue for community helpers 600
   Tools, trash bags, gloves 300
   Professional Development and Curricular Resources 1,500
   300 bulbs In kind
   400 bulbs 300
<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
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<tbody>
<tr>
<td>100 Plants, 60 Shrubs &amp; 10 Trees</td>
<td>2,000</td>
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<tr>
<td>Mural Coordinator</td>
<td>800</td>
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<tr>
<td>Digital Camera</td>
<td>800</td>
</tr>
<tr>
<td>Computer Ink and Paper</td>
<td>300</td>
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<tr>
<td>Telephone</td>
<td>In Kind</td>
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Extra money will go towards purchasing more bulbs, shrubs and trees

Total: 14,700

8. **Educational Planning:**

We see several educational activities taking place in the school yard. Our classroom teachers as well as our full time science teacher explore scientific concepts through ongoing science units. Our vision of an environmentally friendly school yard with lots of greenery including a ‘farmer’s garden’ would provide hands on experiences that compliment the concepts being taught. For example, our second graders are learning about plants, insects, pebbles, sand and soil. A garden would provide many opportunities to observe such elements. Our third graders are taught the water cycle. Our school has a perfect place and position to see and learn about the connection between water on the land and coastal waters, between rain, soil, and coastal environments, as everything drains towards Malibu beach and Dorchester Bay.

We would love to create natural methods of collecting and recycling water into the plant life we plant and grow ourselves. We envision creating devices that capture and hold rain water, allowing students to measure fallen rain, how this rain evaporates and what causes it to do so. Considering the varying seasons, we would love to do the same with snow, allowing students to see it change and gradually disappear. In that our fourth graders study the life cycle of animals as well as plants, it would be wonderful to provide opportunities for them to see how the neighborhood animals interact with the plants in the school. It is our hope that our students will learn to identify some of these plants and animals. Since the Mather is at the crossroads of migration for thousands of birds, providing bird feeders would allow our children to observe nature more closely. Students could make their observations as they ask inquiring questions about migration and the birds themselves. Perhaps a large sundial could be used by students to measure time or we could build a wind station to measure direction and win speed on Meeting House Hill.
Structured recess activities would include running track, shooting hoops, playing football or soccer, hopscotch and foursquare or simply sitting on a few mural painted benches with happy faces reading a good book. We would also like to have multicultural side walk games.

It is our belief that a school yard with a ‘farmer’s garden’ on the east side of the building where the activities are less intense, could provide to our students with a hands on experience as they learn how various plants, fruits and vegetables grow and what they can do to contribute to their growth.

We currently use our auditorium as a gym. We would like our school yard to include a straight three lane track on the north side of our building. We would like the west side to consist of a mini soccer field, to which a mini basketball court runs parallel. On the south side, we can see hopscotch sketches.

Our children participate in community service at the Mather as their weekly activities; therefore, we would include watering plants and maintaining the grounds as a part of their services.

9. **Student Input and Professional Development for Teachers:**

Once the initial meeting is held with staff and students informing them of the schoolyard initiative, every staff member and student will be provided a picture of the school with its five designated areas that will be reconstructed as a result of the grant. Students will be asked to draw or write what they envision going into those designated areas. Students’ ideas will be gathered in our School Yard Initiative binder to refer to and include in conversations with the architect as we discuss students’ ideas as complimentary to the uses and activities mentioned above.

10. **Renovations:**

The school’s entire exterior was re-pointed and sandblasted to remove graffiti. Its dead trees and poison ivy were removed. The building’s interior was painted last summer. Six years ago, parents worked with the Boston Public School Facilities to assemble our playground structure donated by a Mather alumna.

11. **The School Yard’s Physical Condition and Effort for Improvement:**

Over time, graffiti has become less of an issue due to the increased positive community initiatives by the condominium residents and church parishioners. The whole school yard is covered with asphalt, much of which is crumbled and broken up, creating unsafe walking places. In addition, on the edges of the yard where the trees are, the asphalt was placed over the roots causing trees to die slowly. Even more important, this huge impervious surface presents an environmental concern as it eliminates rainwater infiltration and
natural groundwater recharge, bringing the surface storm waters flushing down the hill into the nearby coastal waters — untreated. This project would improve and minimize the impervious surface area based on the City of Boston laws and regulations. The existing play structure put up by parents sits on a bed of woodchips that often end up in children’s eyes or in the surrounding drainage which during heavy rains backed up pipes that cause roof and ceiling damage and free swimming pools which Facilities attempts to suck up before school lets out to clear up a walkway from the main office to the parking lot.

12. Maintenance:
   The schoolyard and surrounding grounds are cleaned daily by the custodian. During the summer, the Boston School Facilities send ground crews to replace the woodchips and trim the existing pockets of shrubs and grass. This will continue with the new school yard although the participation of volunteers will help the maintenance throughout the school year.

Playing Outdoors is good for children.

Organized sports and activities are great, but young children also need plenty of free, unstructured outdoor time. Research shows that kids who get plenty of outdoor free play:

- Are better able to play with other children and work things out with them.
- Experience healthier weight.
- Have fewer problems with hyperactivity and are better able to pay attention.
- Experience less stress than other children their age.
- Score higher on standardized tests.

“Did you know that children will be smarter, better able to get along with others, healthier and happier when they have regular opportunities for free and unstructured play in the out of doors?”

(Burdette & Whitaker, 2005)
Outdoor Learning Environment-related Websites:

- **www.greenhour.org** This website is an extension of the National Wildlife Organization offering suggestions to both parents and teachers about how to increase the amount of time that children spend in nature — thus the name green “hour”.
- **www.planetearthplayscapes.com/greeman.html** A good list of easy, inexpensive things to do outside.
- **www.naturalsciences.org** NC Museum of Natural Science’s website; check out the education tab for excellent resources for teachers.
- **www.naturalelearning.org** Website of the Natural Learning Initiative; the purpose of the Natural Learning Initiative is to promote the importance of the natural environment in the daily experience of all children, through environmental design, action research, education, and dissemination of information.
- **www.cnaturenet.org** Children and Nature Network website; provides access to the latest news and research in the field and a peer-to-peer network of researchers and individuals, educators and organizations dedicated to children’s health and well-being.
- **www.osr.nc.gov/ProfDevandResources/OLEhome.asp** Website of the Office for School Readiness outdoor learning environments tab with many resources for professional development, activity ideas, funding resources and much more.
- **www.cnorthcarolina.org** Website of The NC Department of Environment and Natural Resources. Click on Discover the World Outside for great teacher resources, places to visit, local outdoor events.
- **www.naturalplaygrounds.com/NaturalPlaygroundsDotCom_Teachers_Outdoors.PDF** How to get the teachers involved in utilizing the nature that is all around — good tips for directors interested in changing their teachers’ views of the outdoors.
- **www.earthartist.com/playground/KOLTS.pdf** Information on outdoor learning environments, how and why to create them.
- **www.whitchutchinson.com/children/articles/outdoor.shtml** Creating natural environments, cost, design, and developmental appropriateness.
- **http://playlink.org/** PLAYLINK is a multi-faceted independent play and informal leisure consultancy working in the areas of design, planning, policy, strategy, local engagement, fundraising and organizational development.
- **http://www.freeplaynetwork.org.uk/** The Free Play Network is a network of individuals and organizations, which aims to promote the need for better play opportunities for children.
Suggested Garden Related Books for Children:

**A Farmer’s Alphabet** by Mary Azarian – Wood cuts that should be framed; each letter of the alphabet is a farm-associated word (play a game of thinking of other farm words that Mary didn’t use…make your own farm alphabet book).

**Clara Caterpillar** by Pamela Duncan Edwards – Clara is a cute and carefree common cabbage caterpillar who becomes a courageous and completely contented butterfly. Kids love the language and characters in this great garden adventure.

**Eating the Alphabet – Fruits & Vegetables from A to Z** by Lois Ehlert – A good way to introduce new veggies and fruits to young children.

**Growing Vegetable Soup** by Lois Ehlert – All Lois Ehlert books are wonderful. This is a great book for introducing gardens to young folks. I would also

**Inch by Inch** by David Mallet – Favorite garden song.

**Jack’s Garden** by Henry Cole – A cumulative text (similar to the 12 Days of Christmas, building as you go) that explain how a garden works and the animals involved.

**Muncha! Muncha! Muncha!** by Candace Flemming – A fun book about a gardener who tries to find a way to keep bunnies out of his garden.

**Pumpkin Circle – The Story of a Garden** by George Levenson – A first rate introduction to the growth cycle coupled with outstanding photos and rhythmic text that provide a wealth of information

**Pretend Soup and Other Real Recipes** by Mollie Katzen (author of the famous Moosewood Cookbook) and Ann Henderson – A great cookbook designed for preschoolers and up; uses pictures for recipes for not-yet-readers; important skills in the kitchen – counting, reading readiness, science awareness, self-confidence, patience and food literacy!

**Scarecrow** by Cynthia Rylant – Beautiful illustrations, peaceful text, and a wonderful story that follows the seasons of the garden through the eyes of a scarecrow. Read this with your students and then create a scarecrow of your own.
**The Tiny Seed** by Eric Carle – the simple life cycle of a plant made into an exciting story with a nature and perseverance lesson thrown in for good measure.

**Tops and Bottoms** by Janet Stevens – A trickster tale that also shows how different vegetables grow.

**What’s This?** by Caroline Mockford – A young girl finds an unknown seed and cares for it to discover what it is. Have your students plant a mystery seed and care for it.

**Suggested Titles for Adults:**

- **The Sense of Wonder**, Rachel Carson
- **Sharing Nature with Children**, Joseph Cornell
- **Listening to Nature**, Joseph Cornell
- **Preschool Outdoor Environment Measurement Scale (POEMS)**, Karen DeBord, Linda Hestenes, Robin Moore, Nilda Cosco & Janet McGinnis
- **Miseducation: Preschoolers at Risk**, David Elkind
- **The Hurried Child**, David Elkind
- **Play and Child Development**, Joe Frost, Sue Wortham, & Stuart Reifel
- **No Fear, Growing Up in a Risk Adverse Society**, by Tim Gill
- **The Secret Spiritual World of Children**, Tobin Hart
Living by Wonder, The Imaginative Life of Childhood, Richard Lewis

Last Child in the Woods, Richard Louv

Natural Learning – Creating Environments for Rediscovering Nature’s Way of Teaching, Robin C. Moore

Plants for Play, Robin C. Moore

Play for Everyone, Robin C. Moore

The Geography of Childhood: Why Children need Wild Places, Gary Nabban and Stephan Trimble

The Great Outdoors: Restoring children’s Right to Play Outdoors, Mary Rivkin