

ACTIVE DESIGN

Toolkit for Schools



We dream of a day when all students in New York City

are physically active
and healthy.

THE PARTNERSHIP FOR A HEALTHIER NEW YORK CITY

The Partnership for a Healthier New York City represents a multi-disciplinary group of people working in education, public health, youth development, urban planning and transportation with a common goal of making New York City a healthier place for everyone. The Active Design Toolkit for Schools represents the work of this Partnership with input from representatives of New York City's Departments of Health and Mental Hygiene, Education and Transportation. This toolkit was inspired by conversations with New Yorkers who envisioned creative ways of implementing active design in our children's schools. We hope you are inspired, by the stories presented and the ideas and resources provided, to promote physical activity and healthy eating in our schools and beyond.

For more information about The Partnership for a Healthier New York City, visit healthiernyc.org

Front Cover: The Settlement Housing Fund, the New York City Department of Education, and the School Construction Authority partnered to develop the New Settlement Community Campus in the Bronx. Designed by Dattner Architects and Edelman Sultan Knox Wood Architects, the new mixed-use campus with two schools and a community center serves over 1,000 pre-kindergarten to 12th graders, and the local community.

Credit: Esto Photography Courtesy of NYC School Construction Authority

ACTIVE DESIGN Toolkit for Schools

CONTENTS

 INTRODUCTION	2
 ACTIVE RECREATION	4
1 Outdoor Infrastructure Changes	5
2 Indoor Infrastructure Changes	10
3 Transforming School Spaces with Art	16
4 Utilizing Existing Spaces Creatively	20
5 Looking Beyond Your School	24
 HEALTHY FOODS AND BEVERAGES	28
1 Making Infrastructure Changes	29
2 Revamping Food and Beverage Options	34
3 Promoting Healthy Foods and Beverages Throughout Your School	36
 GREEN SPACES AND NATURE	40
 GETTING TO AND FROM SCHOOL	46
1 Promoting Safe Commuting to School	47
2 Promoting Safe Biking	52
3 Beautifying the Streetscape	58
 MAKING IT HAPPEN	64
 APPENDICES	68
Appendix A: The Building and Visioning Community Workshop	68
Appendix B: Getting the Word Out	74
Appendix C: Active Design Checklists	76
Active Recreation	76
Healthy Foods and Beverages	77
Green Spaces and Nature	78
Getting To and From School	79
 ACKNOWLEDGMENTS	80
 REFERENCES	82

»»» INTRODUCTION

Active design: An approach to the development and design of buildings, streets and neighborhoods that uses architecture and urban planning to make daily physical activity and healthy foods and beverages more accessible and appealing.

.....

CURRENT SCHOOL LANDSCAPE

Every child deserves a healthy, positive school environment. Children’s physical, emotional and social development all benefit from daily physical activity and healthy eating. Better fitness levels are also associated with better academic performance.¹ Currently, only 20% of New York City (NYC) high-school students are getting the recommended 60 minutes of daily physical activity² and less than half (41.3%) participate in daily school physical education.³ Close to 40% of students in kindergarten through 12th grade in NYC are overweight or obese,¹ putting them at greater risk for chronic diseases as they move into adulthood. Because students spend so much of their day at school, schools are uniquely positioned to help increase physical activity and healthy eating opportunities for students.

THE CHALLENGES

The spaces in and around our schools can influence whether or not children are physically active. Many schools lack adequate play yards or gymnasiums. Some parents do not feel confident that their children can actively travel (i.e. walk or bike) to school safely. Also, some students express that litter near their schools makes physical activity in those spaces unappealing.

STEPS TOWARD A SOLUTION

There are many creative ways, both large and small, to foster physical activity in and around schools. You—as a part of the school community—can help re-design spaces in and around your school to encourage physical activity and healthy eating as a part of daily life. This toolkit provides ideas and resources to incorporate active design into your school. Many of the ideas presented are simple, but have immense potential to improve the overall success, health and well-being of our City’s students.



Kids get moving outside with Asphalt Green's Recess Enhancement Program.
Credit: The Partnership for a Healthier New York City

Benefits of Physical Activity^{4,5}

MORE FOCUS

On School Tasks

MORE ATTENTIVENESS

In the School Setting

LOWER LEVELS

Of Anxiety and Depression

HIGHER

Self-Esteem

GREATER

Cardiorespiratory Fitness

STRONGER

Muscles

LOWER RISK

Of Developing Chronic Diseases

GREATER CHANCE

At a Healthier Adulthood

I dream of a day when...

all schools involve students as leaders in the built environment.

MAC, MANHATTAN



ACTIVE RECREATION

Active recreation: structured or unstructured play, leisure activities or exercise.

Many schools across NYC have inadequate outdoor space for play, sports or exercise for students. The challenge of inadequate recreational facilities disproportionately impacts schools in Black and Latino communities.⁶ Yet, increasingly, NYC schools are developing creative solutions to provide space for play, sports or exercise. Your school community can create solutions too.

.....

WHY THIS MATTERS

- Physical activity has both immediate and long-term benefits for academic performance.⁷
- Unstructured playtime promotes creativity and strengthens problem solving skills.⁸
- Physical activity helps children develop social skills.⁹
- Active recreation can promote self-esteem.⁹
- Organized recess activities may help reduce bullying.¹⁰

The NYC Department of Education (DOE) Office of School Wellness offers many resources to schools looking to implement active design strategies such as small grants, an informational portal and guidance for creating a School Wellness Council.

Visit schools.nyc.gov, search "Office of School Wellness"

I dream of a day when...

all schools combine education and play to create a new dynamic way of learning.

SHARIFA, QUEENS

1

OUTDOOR INFRASTRUCTURE CHANGES

Changes large and small to a school's built environment can transform students' ability to play outside.

Ideas:**Pursue a joint use agreement to open school playgrounds for after-hours use.**

Keeping school playgrounds open after hours gives more youth and community members access to play and exercise spaces when the school day is done.

Paint or stencil on concrete or asphalt lots or yards. Painting hopscotch and other games on the ground is a cheap and easy way to increase children's activity levels.¹¹

Build a buddy bench. Schools across the country are using brightly colored designated "buddy benches" on the playground to promote kindness and counter bullying. A student can sit on a buddy bench if he or she feels lonely. Other students are encouraged to approach anyone on the buddy bench and invite him or her to play.

Consider roof space. Roof space may present an opportunity for schools without street-level space to build facilities such as a track or to plant a garden.

Open a Play Street near your school building. Play Streets offers permits to create a car-free block during specified hours so students can enjoy outdoor activities throughout the school year. Play Streets can provide space for recess or for physical education.

Questions to Consider

1. Are children active in outdoor school areas?
2. How do the outdoor spaces look and feel?
3. Do the outdoor spaces support appropriate activities for the age group(s) being served?



In a Bedford-Stuyvesant housing development, over 200 volunteers came together to build this child-designed playground with KaBOOM!, Forest City Ratner, and Bedford-Stuyvesant Restoration Corporation. Improvements like this can be made at schools.
Credit: The Partnership for a Healthier New York City

Resources:

Changelab Solutions has useful resources on implementing joint use or shared use agreements.

Visit changelabsolutions.org/shared-use

KaBOOM! provides grants and other resources to communities interested in creating and enhancing play places. “Build it Yourself!” by applying for one of KaBOOM!’s \$15,000 grants or a chance to “Build it With KaBOOM!” Sign up for grant alerts at KaBOOM!’s website.

Visit kaboom.org

NYC Guide for Green Roofs on Existing School Buildings explains the benefits of green roofs and provides guidance on cost and maintenance.

Visit schools.nyc.gov/NR/rdonlyres/F8102A3E-4958-49E3-A7F5-95ABD8646B3E/0/GreenRoofGuidance.pdf

Peaceful Playgrounds sells low-cost, easy-to-apply school playground stencils for ground markings you can paint to create active play spaces for students. Grants for other school improvement projects are also available.

Visit peacefulplaygrounds.com

School Play Streets can be operated daily to weekly by schools or by community organizations. Public and private schools in all five boroughs are eligible to apply. Work with your community board to obtain approval to organize a Play Street.

Visit nyc.gov, search “play streets” or email playstreets@health.nyc.gov

The Trust for Public Land NYC works closely with public school students, staff and community members to design and renovate new playgrounds on barren asphalt lots. These projects include athletic fields, basketball courts, running tracks, gardens, seating, trees and drinking fountains. Find out about the new “Green Playgrounds” being built in partnership with the NYC Department of Environmental Protection (DEP) and the DOE.

Visit tpl.org/nycplaygrounds

.....

DID YOU KNOW?

Getting students involved in school transformations may help improve school connectedness. Better school connectedness can mean:¹²

- Better grades
- Lower smoking rates
- Less violence



With design input from students and nearby residents, the NYC Department of Environmental Protection, NYC Department of Education, and the Trust for Public Land in partnership with public and private sectors created this new playground at J.H.S. 218 in East New York. It is designed to absorb storm water runoff and prevent flooding while providing access to play and recreation for students and the surrounding community. Credit: The Trust for Public Land

Success Story 1: Transforming an Asphalt Yard into a Beloved Sports Park

Location: P.S. 87, Wakefield, Bronx

Goal

To increase recreation and play space for the school and community

Key Takeaways

- Create private and public partnerships
 - Engage students, staff and the community from the beginning
-



P.S. 87 has long been a center of physical activity in the Wakefield community of the Bronx. In addition to the school's strong emphasis on recreation and athletics, the Bronx Flash Track Club, a division of the New York Road Runners, ran an after-school and summer program at the school. Unfortunately, what the school possessed in enthusiasm for its sports and recreation programs, it lacked in physical space to play. The play yard was a cracked asphalt lot divided by chain link fences, and the closest park was located more than a mile away.



In 2010, that changed. P.S. 87 students and staff along with community sponsor Unity Neighborhood Center partnered with the New York City Department of Parks and Recreation (NYC Parks and Recreation), PlaNYC, The Trust for Public Land and the Arlene & Arnold Goldstein Foundation to transform the school's empty yard into a vibrant park.

The new space is open to the community after school hours and on weekends, year-round. It features a turf soccer field, a running track, basketball hoops, play equipment, outdoor spaces where classes can be held, a stage, a water fountain, benches, game tables, raised garden beds and trees. One school staff member remarked how the park is the centerpiece of the school and that it has generated a lot of enthusiasm in the school and community. Now the neighborhood soccer team has a new field to use and student athletes have a place to practice skills like teamwork and self-discipline that transfer to the classroom.

Top: Before, the outdoor space at P.S. 87 was nearly unusable.

Bottom: Afterwards, with help from the Trust for Public Land, among others, the play area is vibrant with physical activity. Trees and bright paint give the kids a reason to enjoy recess and other activities.

Credit: The Trust for Public Land

This project was a team effort by a mix of private and public entities. The Trust for Public Land led a participatory design process and secured approvals from the NYC School Construction Authority. The NYC Parks and Recreation provided funds to construct the playground. The community sponsor, Unity Neighborhood Center, led community organizing and outreach efforts.

Most importantly, students, staff, parents and the broader community were involved in the design process from the beginning. Incorporating the people who understand the needs of the community best, and who will use the equipment and space most, took time, but it ensured that the project was a success.



Children enjoy the track on their new playground.
Credit: The Trust for Public Land

Active buildings: Buildings that encourage physical activity by supporting active transportation, active recreation, exposure to green space and nature, and access to healthy food and beverages.

Key Questions to Consider

1. Does the school building have a gym?
2. If so, does the school maximize the space?
3. Does the building have any unused classrooms?
4. Are there other, non-traditional spaces in the school that can be used to promote physical activity?

2 INDOOR INFRASTRUCTURE CHANGES

Have unused space? Or have a vision for transforming a space? Many schools have used the following ideas and resources to increase students' physical activity.

Ideas:

Install "springy gym flooring" in a non-traditional space. Install a gym floor, safe for physical activity, in spaces such as the school lobby, cafeterias or even hallways and classrooms so that those spaces can serve multiple purposes.

Build an indoor playground. This requires some creativity and planning. Go to page 14 to read the story of how The Renaissance Charter School in Jackson Heights, Queens built an indoor play space, and get inspired!

Convert unused or underused spaces into a fitness space. When thinking through alternative spaces to a gymnasium, consider unused classrooms, the lobby, the auditorium and hallways. Ask students what they would like to see in a fitness room. Hula hoops? Weights? Climbing walls? Other equipment?

Coordinate the use of spaces. Multiple schools can be co-located in the same building. To maximize the use of space and minimize conflicts, be sure to assign one person or system to schedule usage for all schools in the building.

In Manhattan, P.S. 110's lobby doubles as a gym space after the concrete floor was replaced with an "Elastiwood" surface suitable for physical activity. Credit: NYCDOHMH



DID YOU KNOW?

There is emerging evidence that classroom and furniture design may influence incidental physical activity in children. For example, having movable furniture and enough space in classrooms for children's movement, as well as furniture that increases micro-movement rather than static sitting, may help increase children's physical activity levels.^{13,14,15,16,17}



Furniture can encourage an active posture and special seating can be designed to support children's micro-movement.
Credit: VMDO Architects

.....
DID YOU KNOW?

The Office of the United Nations High Commissioner for Human Rights recognizes play as a child’s human right.¹⁸

Resources:

DOE’s Office of Space Planning works with the DOE Office of School Wellness Programs (OSWP) and New York City School Construction Authority (SCA) to support schools that are struggling with space constraints. In two years, the office completed 30 renovations, including the creation of fitness rooms and space conversions to promote physical activity.

Visit schools.nyc.gov, search “Office of Space Planning”

Architecture for Humanity believes that everyone deserves access to the benefits of good design. Through Design Education for Youth, they work with local youth to design and develop innovative educational spaces that encourage learning and foster pride in the community. The organization helps clients realize their goals through various methods, including design charrettes (design or planning activities), competitions, schematic and design services, education and advocacy, and small scale design/build services.

Visit afhny.org

Center for Architecture Foundation promotes public understanding and appreciation of architecture and design through educational programs for kindergarten through 12th grade students and teachers, families, and the general public. Their programs use the built environment and visual tools to inspire participants to think critically about the importance of design in the world around them.

Visit cfafoundation.org

M.S. 223 in Mott Haven turned their staff lunchroom into a fitness center. The new space is open to students, staff and parents.
Credit: M.S. 223





P.S. 47 in Manhattan requested Resolution “A” funds to create this playground. Reso “A” projects are school specific and the individual grants go towards enhancements and upgrades to existing facilities.

Credit: NYC School Construction Authority

Funding Tip

You can request funding for large-scale improvement projects through capital funding or Resolution “A” funding requests to the City Council or Borough President’s Office.

See the “Making it Happen” section for more information.

Success Story 2: Soliciting Community Involvement

Location: The Renaissance Charter School, Jackson Heights, Queens

.....

Goals

To design an indoor playground through collaboration and get students active indoors

Key Takeaways

- When outdoor space is limited, explore creative uses of indoor space
 - Always solicit ideas and input from students
 - Build relationships with local community leaders and encourage their participation in projects
-



The Renaissance Charter School in Jackson Heights, Queens was created out of a collective endeavor among teachers, parents, architects and designers to convert an old department store into a school. When educators faced the challenge of limited outdoor space for recess, they were inspired to design a space with the creative vision of the school community.



The school community decided to install a playground in a common indoor space. School leaders asked students to think of their ideal playground design. Submissions were considered based on the space constraints and whether they were feasible. The students expressed a love for bridges and color, so these elements were ultimately included in the new play space. Teachers', custodians', parents' and even grandparents' ideas were included in the planning process.

To make the school community's dreams a reality, while considering safety and practicality, the school consulted with the NYC School Construction Authority (SCA), DOE Offices of School Planning (Division of District Planning) and Building Design, and the school's custodial office. A private playground designer and local artists also offered support.

Thanks to committed and vocal parents and the school's strong relationships with local elected officials, the funding and other capital resources needed for this project were secured.

The school now has a playground that resembles Central Park—with "running paths" painted on the ground and trees, rocks and statues painted on the walls! The playground also incorporates bridges and plenty of color. Today, the playground is used for recess twice daily and for after-school programs.

Just like Central Park, the indoor playground features tunnels and bridges. The walls beyond are painted to represent Central Park's greenery.
Credit: Renaissance Charter School



Students helped to design the common space for early grades at The Renaissance Charter School in Jackson Heights, Queens.
Credit: NYCDOHMH

3

TRANSFORMING SCHOOL SPACES WITH ART

Art can help draw attention to messages of health and well-being—both outdoors and indoors. It can also promote physical activity by making spaces more pleasant and inviting.

Ideas:

Use creative messaging and brighten up the stairwells. Signs and artwork encouraging people to take the stairs have been shown to be effective. While students are required to take the stairs at most NYC schools, the stairwells can also be used as a place to reinforce messages of healthy living. Consider asking students to paint a mural on the stairwell walls or on the stairs themselves.

Decorate wall space and old handball courts. Work with your school community to redesign these spaces using paint, photography and more!

Give old basketball hoops and courts a facelift. Keep the correct court markings and have students redesign the backboards, or add a fresh coat of paint to courts.

Decorate the fence. You can lighten up the fence around the playground for students and passersby using cups, ribbon, yarn, or even photography and painting.



Top: Students at work stenciling their stairwell in homage to Keith Haring and active living.

Credit: The Partnership for a Healthier New York City

Bottom: A mural outside of a Harlem school created in partnership with CityArts, an organization that brings youth and artists together.

Credit: The Partnership for a Healthier New York City

I dream of a day when...

all students explore creativity as a daily experience, to dream, to experiment, to love each day.

DONALD, MANHATTAN

Resources:

Groundswell brings together artists, youth and community organizations to visually transform public spaces.

Visit groundswellmural.org

Habitat for Humanity NYC's Brush with Kindness program can help your school beautify and rehabilitate the playground area through mural painting.

Visit habitatnyc.org

Materials for the Arts (MFTA) distributes free materials to teachers for use in the classroom. MFTA, NYC's premier creative reuse center, is a unit of the NYC Department of Cultural Affairs, with support from the NYC Departments of Sanitation and DOE. MFTA collects a wide variety of materials donated by businesses and individuals and makes them available for free to non-profit organizations with arts programs, public schools, and NYC government agencies. All public school teachers, not just art teachers, can register for membership with Materials for the Arts to receive free classroom supplies.

Visit nyc.gov/mfta or call 718-729-2150

NYC Department of Transportation (DOT) partners with community organizations and artists to showcase art. If your school is near DOT property, contact the DOT to see if that space is eligible for its art program.

Visit nyc.gov/dotart

NYC Stair Prompts promote stair use and can be ordered for free by calling 311.

Visit nyc.gov, search "stair prompt"

Public Art for Public Schools, a unit within the School Construction Authority, commissions art projects for new schools, maintains and preserves artwork in existing schools, and oversees art donated to NYC public schools.

Visit nycsca.org, search "public art"

PubliColor works with at-risk students to build self-confidence through design- and painting-based programs. Students transform their own schools and nearby community facilities with vibrant colors.

Visit publicolor.org

Xmental, Inc is a coalition of community organizers, artists and teachers committed to mentoring and educating urban youth. Xmental works with youth on graffiti projects to beautify spaces.

Visit xmental.org

Success Story 3: Transforming a Dilapidated Playground through Teamwork and Art

Location: 220 Henry Street, Playground, Lower East Side, Manhattan

Goal

To brighten up an outdoor play space and to encourage physical activity

Key Takeaways

- Small changes can yield big improvements
 - When assessing your space, think about shared-use
 - Work together with local stakeholders to maximize success
-



Some cans of spray paint waiting to be used to beautify the playground in partnership with Xmental.
Credit: The Partnership for a Healthier Manhattan

In 2014, District 1 Community Education Council (CEC1), The Partnership for a Healthier Manhattan, Xmental, Inc. and four co-located Lower East Side schools (University Neighborhood Middle School, CASTLE Middle School, Henry Street School for International Studies and Manhattan Charter School) celebrated the completion of a mural and fence art installation at their shared playground at 220 Henry Street. The mural represents the collaboration between four District 1 schools to promote healthy and active living.

This project began after a districtwide needs assessment of school gym and play yard facilities showed that this playground, which was shared by several schools, was in need of a makeover. In response, the CEC1 and their District Leadership Team hosted an active design workshop about enhancing the environment to help promote healthy lifestyles. After attending the workshop, the participating schools were inspired to beautify the 220 Henry Street playground, recognizing the potential impact on the health and academic achievement of their students.

The schools partnered with Xmental Inc, a non-profit that mentors youth through the power of art. Xmental Inc. worked with students and community members to reimagine the play space and take it from design to implementation. They armed themselves with paint rollers and spray cans to create a mural paying homage to NYC underground graffiti artist pioneer Lee Quiñones, who first painted the handball court in the playground in the 1970s. By participating in this process, students from these four schools will leave, as their legacy, an enlivened school yard that students will enjoy for years to come.

Each school contributed to transform a once dilapidated and grey space into an area that fosters well-being. The mural promotes health and active living, not just for the four schools it serves, but for the entire Lower East Side community.



If you really believe in
what you are doing, WORK HARD!
There's nothing possible!
And if somebody thinks
you can't, you can!

WORK HARD

Students at four schools on the Lower East Side partnered with Xmental, Inc. to bring active design to their playground. Credit: The Partnership for a Healthier Manhattan



Participants of Asphalt Green's Recess Enhancement Program have a blast outside.

Credit: Asphalt Green

4

UTILIZING EXISTING SPACES CREATIVELY

Use programming to complement infrastructure changes to get students moving. Partner with program providers to creatively make use of limited space.

Ideas:

Connect with an outside organization to offer training to teachers or to run programming.

Use existing spaces such as auditoriums, hallways and even the classroom for physical activity programming.

Use video and audio programming to help get students moving indoors.

Resources:

Activity Works is a series of curriculum-aligned classroom-based physical activity audios and video designed for pre-K through third grade.

Visit activityworks.com

Asphalt Green's Recess Enhancement Program (REP) offers training and professional development to help elementary schools address barriers to physical activity during recess such as lack of adequate play space and staffing. REP also brings recess indoors by modifying recess activities for the auditorium, cafeteria, classroom, gym and hallway.

Visit asphaltgreen.org/REP or email rep@asphaltgreen.org

The **DOE Office of School Wellness Programs** has many helpful resources for schools.

- **Training** in workshops such as “No Gym? No Problem!” or certification in the “Physical Best: Physical Education for Lifelong Fitness” curriculum are among the many resources for professional development..

Visit schools.nyc.gov

- **School Wellness Works Portal** includes a database of resources for physical education, health education, physical activity, food, school environment and community wellness. Email Wellness@schools.nyc.gov with “Portal” in the subject line for access. Program staff will contact you with instructions.

- **Move-to-Improve (MTI)** trains kindergarten through fifth-grade teachers to incorporate short, structured activities that integrate physical activity into educational lessons and are aligned with New York State Physical Education (PE) Learning Standards. MTI can supplement a school's existing PE program and help schools meet the required 120 minutes of PE per week. Also, MTI activities integrate new Common Core Learning Standards.

Visit schools.nyc.gov, search “move to improve”

Fit 4 Life NYC supports healthy and active environments in schools through on-site customized fitness, nutrition and wellness programs for children to young adults, teachers and parents.

Visit fit4lifeny.com

I Challenge Myself uses endurance sports to help NYC public high school students combat childhood obesity, learn to set and achieve goals and prepare for college and the workforce. Its Cycling Smarts program introduces students to endurance bicycling, culminating in a one-day, 100-mile bike tour. Its College Bike Tour summer program allows students to visit colleges in upstate New York.

Visit ichallengemyself.org

Just Move is an in-class exercise program created by Choosing Healthy & Active Lifestyles for Kids (CHALK), an obesity prevention program of New York-Presbyterian Hospital. Just Move uses flashcards mapped to the Common Core learning standards to provide short in-class physical activity breaks. The program incorporates yoga, breathing and meditation.

The Just Move kit is available at activeschoolsasap.org/node/213

Visit chalkcenter.org

New York Road Runners (NYRR) is the world's premier community running organization; its mission is to help and inspire people through running. NYRR offers free youth running programs like Mighty Milers and Young Runners, plus events and resources to get kids moving.

Visit nyrr.org/youth-and-school or email youthprograms@nyrr.org



One of thousands of kids in NYRR Mighty Milers at the year-end fun runs at Icahn Stadium.
Credit: New York Road Runners

Success Story 4: Preserving Indoor Recess when there Does Not Seem to be Enough Space

Location: Mosaic Preparatory Academy (P.S. 375), East Harlem, Manhattan

Goal

To increase students' physical activity despite very limited space

Key Takeaways

- When outdoor play is not an option, indoor play is important to children's well-being
 - Appropriate outlets for energy can help improve classroom and on-task behavior
-



Kids getting active indoors with Asphalt Green's Recess Enhancement Program. Credit: Asphalt Green

Indoor recess can be a challenge, but keeping kids active is important especially for social-emotional learning and appropriate classroom behavior. P.S. 375 faced indoor space constraints, which limited students' abilities to play inside. Students needed an appropriate outlet for their energy, especially during long New York City winters.

Allowing children to play actively indoors during inclement weather is a major part of the Asphalt Green Recess Enhancement Program's (REP's) mission. REP modifies recess activities for auditoriums, cafeterias, classrooms, gyms and hallways and is committed to keeping students active, while staying safe and having fun.

P.S. 375 and REP use a small indoor lobby to keep students active with games like Twizzle to replace sedentary activities such as watching movies. Twizzle has students doing a series of fun, active movements in response to commands. REP also offers games that require little room for movement or that incorporate play stations which can be safer and easier to supervise.



Recess Enhancement Program
ASPHALTGREEN.ORG/REP

TWIZZLE

READY

EQUIPMENT:

NONE

SET-UP:

STUDENTS FORM A CIRCLE

NUMBER OF STUDENTS: 15 +

TIME: 15 MINUTES +

EXPLAIN

- 1 Form a circle. Listen for the commands.
- 2 When you hear:
 - 'Go' - walk in the direction you are facing
 - 'Stop' - freeze
 - 'Turn' - do a half turn (180 degrees) and freeze
 - 'Twizzle' - do a full jump (360 degrees) and freeze
- 3 If you make a mistake, do 5 jumping jacks, and rejoin the game.

✓ **For Understanding:**

- What do you do for a 'turn'?
- What do you do for 'twizzle'?

GAME TIP:

- Practice the commands with students before starting the game.

CONFLICT RESOLUTION TIP:

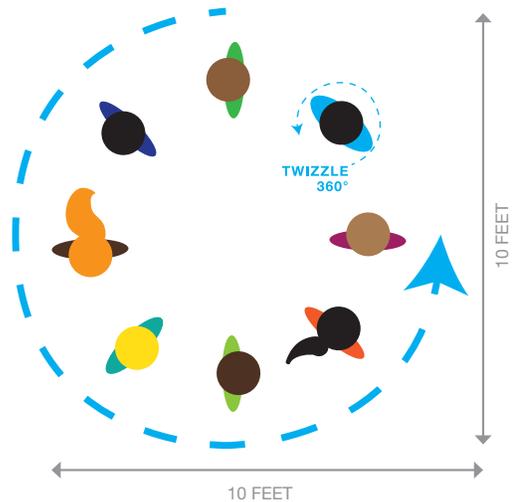
- If a student makes a mistake give them a high-five.

INDOOR TIP:

- Have students jog slowly in a circle.

PLAY → REP IT OUT!

- **EASY:** Walk in a circle
- **MEDIUM:** Side shuffle in a circle
- **HARD:** Hop on 1 foot in the circle



ENVIRONMENT:

CAFETERIA

CATEGORY:

ENERGIZERS/
ACTIVE LISTENING

FITNESS FOCUS:



BACK-UP GAMES:

ZIP-ZAP-ZOOM
CAT AND MOUSE

ENERGIZERS / ACTIVE LISTENING

GRADES K-5

INDOOR

CAFETERIA

G-14

One of the many REP games to get kids active indoors, especially when space is limited or during inclement weather.
Credit: Asphalt Green

5

LOOKING BEYOND YOUR SCHOOL

If you have limited space or ability to work on new infrastructure projects, consider looking beyond your school for programs and open spaces.

Ideas:

When gym space is limited, use parks. Parks can be used for outdoor play, events and volunteer opportunities.

Take action to improve your local park—or, if vacant land is available, create a new park or community garden. Many resources are available to help with this.

Resources:

596 Acres identifies vacant public land that may be available for community use. Visit 596acres.org

Kids in Motion, run by NYC Department of Parks and Recreation, offers innovative fitness and sports programming designed to encourage play and outdoor activity in NYC children. Operating at more than 125 parks and playgrounds citywide, staff lead organized sports, games, fitness demos, guided walks, special events, and arts and cultural activities for children. Activities are free and are offered five days per week/seven hours per day.

Visit nycgovparks.org, search “kids in motion”

Learning Through an Expanded Arts Program gives youth the opportunity for self-expression through the creation of art in NYC parks. The displays are highlighted in an exhibition that spans all five boroughs.

Visit leapnyc.org

NYC Department of Parks and Recreation has useful information on their website for obtaining permits for student activities and events, different park facilities, volunteer opportunities, requesting services and reporting issues. Be sure to check permit requirements for events.

Visit nycgovparks.org

Partnerships for Parks (PfP) is a joint program of the City Parks Foundation and the NYC Department of Parks and Recreation that facilitates volunteer opportunities in City parks.

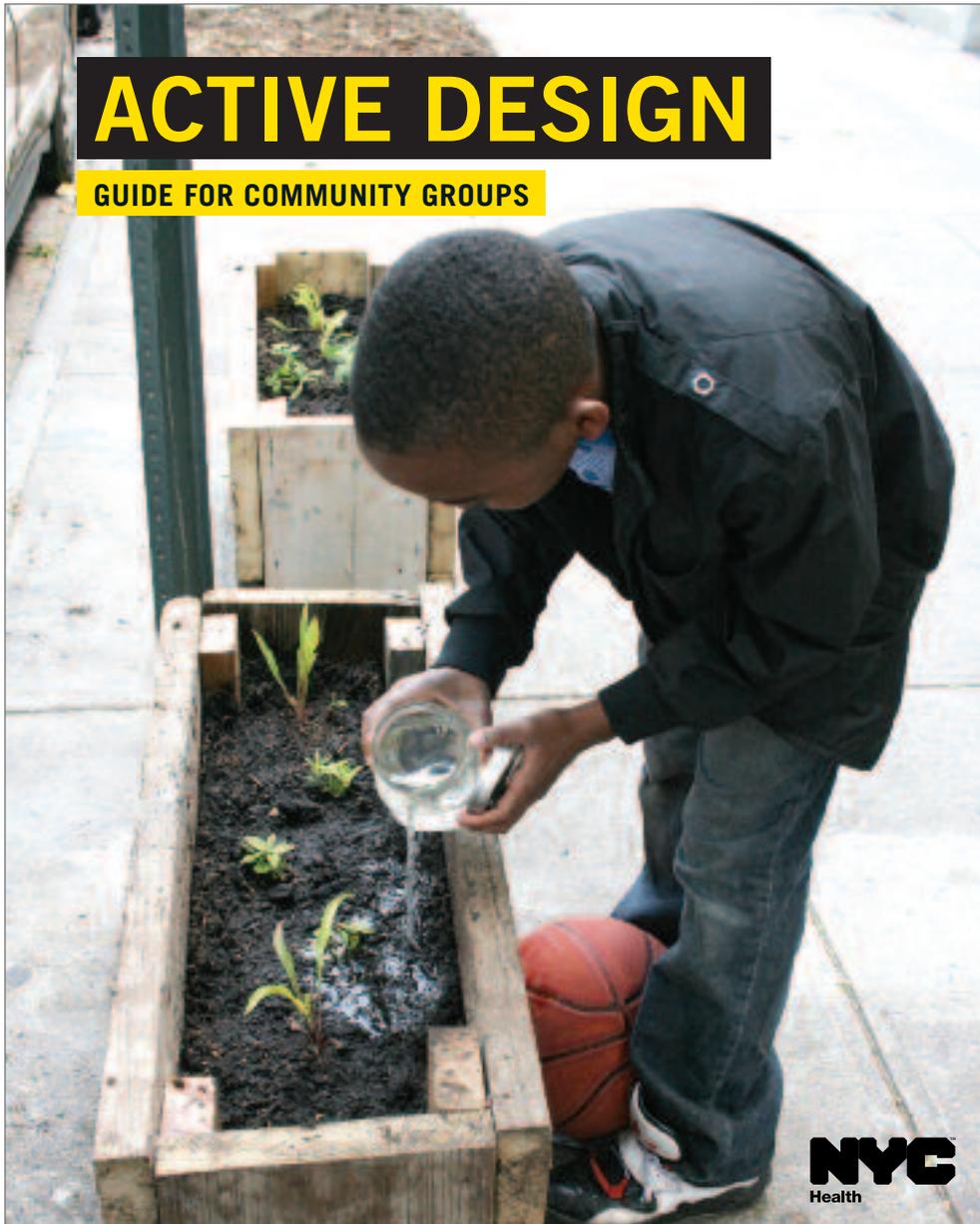
Visit partnershipsforparks.org

People Make Parks (PMP) is a joint project of Hester Street Collaborative and PfP aimed at helping New Yorkers participate in the design of their parks. Online resources are available.

Visit peoplemakeparks.org

ACTIVE DESIGN

GUIDE FOR COMMUNITY GROUPS



NYC
Health

Need More Ideas and Resources to Improve the Community Around Your School?

Check out the **Active Design Guide for Community Groups**.

Visit nyc.gov, search "Active Design for Community Groups"

Success Story 5: Turning an Empty Lot into a Thriving Urban Farm

Location: Eagle Academy for Young Men II and Mott Hall IV Middle School, Bedford Stuyvesant, Brooklyn

.....



Goal

To beautify the neighborhood, create new learning opportunities for students and provide fresh produce

Key Takeaways

- Look for vacant community spaces that can be transformed into green space
 - Projects that benefit the whole community (like community gardens that produce healthy food) can draw more collaborators
-



In 2012, staff members from Eagle Academy for Young Men II noticed signs hung by 596 Acres at an empty lot, soliciting interest for renovation. So, the Eagle Academy decided to join forces with the nearby Mott Hall IV Middle School to create a community garden for students.

In addition to alerting the schools to the opportunity, 596 Acres guided the students' efforts to rejuvenate the space. The schools also received essential support from many other community partners. The Bed-Stuy Campaign Against Hunger provided a head farmer and a plan for the site layout. The Brooklyn Food Coalition contributed much needed supplies. Additionally, the NYC Department of Parks and Recreation's Green Thumb program green-lighted the project with the appropriate license and provided additional resources.

In just six months, an empty lot was converted into an outdoor classroom for the two schools and has now been a well-used community space for over two years. The students not only learned how to grow fruits and vegetables, but also developed leadership, community engagement and project management skills. Neighborhood residents also volunteer in and enjoy this new green space. Starting by just looking around the neighborhood, two schools helped transform a once abandoned space into a vibrant physical place where students and residents can learn and work together.

Top: Friend of 596 Acres and artist Swoon helped bring art to the lot.
Credit: 596 Acres

Bottom: Schools, community groups and artists joined forces to transform an empty lot in Brooklyn into an outdoor classroom in just six months.
Credit: 596 Acres



Students pick kale and lettuce while learning water conservation techniques at the The Bed-Stuy Campaign Against Hunger Urban Farm.
Credit: 596 Acres



HEALTHY FOODS AND BEVERAGES

Access to healthy and affordable foods and beverages complements access to physical activity to improve student health. Schools have an opportunity to make healthier options more available and more desirable to students. There are several changes big and small that your school community can make!

.....

WHY THIS MATTERS

- Drinking adequate amounts of water is important for memory and overall cognitive function, especially among children.^{19,20}
- Changes made to school food environments have been linked to improved levels of concentration and alertness in the classroom.²¹
- Healthy breakfast programs at school are linked to better memory, mood and attendance rates.^{22,23,24}
- School salad bars encourage green vegetable consumption.²⁵
- Providing fruits (fresh, dried or canned) and vegetables in multiple venues like vending machines, snack carts, a la carte and/or school lunch increases consumption of these healthy items for high school students.²⁵
- When schools make water available through water fountains, children drink more water and are less likely to be overweight.²⁶



An open cafeteria design serves as a lab and teaching kitchen for students at Buckingham Primary and Elementary School in Dillwyn, Virginia. Credit: VMDO Architects

I dream of a day when...

all students can follow their food from seed to stove.

AMBROSIA, MANHATTAN

1

MAKING INFRASTRUCTURE CHANGES

Whether building a new cafeteria or simply looking to make small changes to help students make healthy choices, here are a few infrastructure changes to consider.

Ideas:

Make water more accessible to students. There are several water delivery options to make water more available to students.

- Replace water fountains. When choosing a water fountain, consider what students will find convenient and appealing.
- Consider having a water jet in your school cafeteria. Electrically-cooled water jets (large, clear plastic jugs with a push lever for fast dispensing) make cold and fresh tap water easily available to students.

Get a salad bar. Salad bars allow students to make the healthy choice the easy choice. They are also an effective strategy to increase children’s access to and consumption of fruits and vegetables.

Renovate or build a new cafeteria. Make sure your cafeteria is appealing to students and food options are laid out in a way that promotes healthy options.

Create a school garden. Spending time gardening can help improve eating habits.



In addition to serving the kindergarten through 8th grade Alternative Lunch Menu, P.S. 107 provides students with a fresh and delicious salad bar as a daily lunch option.

Credit: Green and Healthy 107

Resources:

DOE SchoolFood has many healthy eating programs your school should consider participating in. Also, they have installed more than 1,000 salad bars and 800 water jets in NYC schools. Contact your school's SchoolFood Manager and/or the District SchoolFood Supervisor.

Visit schoolfoodnyc.org, click "programs". Learn more about SchoolFood on page 34.

The Healthy Eating Design Guidelines for School Architecture published by the Centers for Disease Control and Prevention provides a framework for architects to work with school stakeholders interested in promoting a healthy cafeteria and fostering healthy eating habits.²⁷ Everything from the design of the kitchen, chairs and tables, to lighting, sound and color palettes matter!

Visit cdc.gov/pcd/issues/2013/12_0084.htm

Slow Food NYC's Urban Harvest program helps teach NYC children about the effects of good food on their health and well-being, as well as the health of their communities and the planet. Programs include school gardens, farm stands and school trips.

Visit www.slowfoodnyc.org

Water in Schools is a project of the California Food Policy Advocate. Their "Water Works" publication gives step-by-step guidance for schools interested in increasing water consumption for students.

Visit waterinschools.org/pdfs/WaterWorksGuide2014.pdf

Students at Bronx Academy of Letters set up a weekly farmstand with the help of Slow Food NYC.
Credit: Slow Food NYC



Slow Food NYC's Urban Harvest Program worked in partnership with Brownsville Multi-service Center (BMS) to create the Ujima urban farm. Here, a student farmer cares for one of the laying hens in residence at this free access educational, edible garden in East New York, Brooklyn. Credit: Slow Food NYC



Success Story 6: Redesigning the Water Fountains

Location: The Renaissance Charter High School for Innovation, East Harlem, Manhattan

.....

Goal

To engage students in active design and increase water consumption

Key Takeaways

- Students can drive larger change
 - Assess students' behaviors and attitudes before and after an intervention
-



In 2010, freshmen at the Renaissance Charter High School for Innovation (Innovation) took a trip down south as part of a civil rights practicum and it changed their perspectives on social justice. The visit left them wanting to do something in their community.

Two years later, 12 of those same students gathered in the school's library for a crash course on active design. It was a perfect fit for students looking for a unique experience and aligned with the school's mission of experiential learning.

During the introductory session, the students were encouraged to think about how the community environment influences certain behaviors. Camera phones and school active design audit forms (see Appendix C) in tow, the students documented their school environment, taking pictures and jotting down notes about what they would change to promote health in their school. There was consensus: the water fountains needed a makeover. Surveys conducted with over 200 other students at Innovation confirmed this. Several students called the fountains "dirty," "scary" and "weird."

To remedy this, the students wanted to beautify water fountains with art to encourage their friends to drink more water and fewer sugary drinks. The students' leadership inspired school administrators to order three water bottle refilling stations. Due to the success of the refilling stations the administration ordered every student a school-branded water bottle.

With the support of a small grant from the DOHMH, the leadership of students, support of the school administration and School Construction Authority, habits are now changing. Before the intervention, 49% of surveyed students said they used the water fountains. Now, 77% of students report using the water fountains.



Top: Students at Innovation were not fans of the old, dirty water fountains and so they went unused.

Credit: The Renaissance Charter High School for Innovation

Bottom: School administration provided every student with a school-branded water bottle after the new stations were a great success.

Credit: The Renaissance Charter High School for Innovation



The new water filling station is a standout in the vibrant hallway. Credit: The Renaissance Charter High School for Innovation

2

REVAMPING FOOD AND BEVERAGE OPTIONS

DID YOU KNOW?

DOE’s Office of SchoolFood (SchoolFood) serves around 850,000 meals every day to about 1.1 million students in over 1,700 schools. Over the past decade, SchoolFood has made tremendous strides in improving the nutrition and taste of school meals. Recent menu changes include sweet potato wedges and whole wheat pizzas with low-salt sauces!

Consider what food and beverage options are available in your school and work together to make them healthier.

Ideas:

Create a committee. Form a School Wellness Council to make improvements to your school food environment. See pages 2, 20 and 41 for more information on School Wellness Councils.

Connect with your SchoolFood Supervisor. Your SchoolFood Supervisor can help answer questions you may have about improving your school’s food environment. To find your District’s SchoolFood Supervisor, visit schoolfoodnyc.org and select “District Office Directory” under SchoolFood Links.

Add healthy a la carte choices. Remember, students love convenience—so try to make sure healthy snacks are an easy ‘grab-and-go’ option.

Change up your vending machine. Consider reviewing the list of recommended snacks with your students to see which healthy snack items appeal to them. Be sure to follow NYC Agency Food Standards and remember, elementary schools are not allowed to have food vending machines.

Visit nyc.gov, search “vending machine standards”

Host a healthy fundraiser. Healthy food or non-food fundraisers can be a successful way to bring in needed funds while keeping your school community healthy.

Red Rabbit’s Gardening lab teaches kids about the benefits of eating fruits and veggies and how to prepare them.
Credit: Red Rabbit



Keep In Mind

Students may be more likely to eat fruits and vegetables when they’re presented with a colorful selection. Choice, convenience, and ease are also important.²⁸

Resources:

A+Fundraisers for High Schools, the **Healthy Fundraising Tip Sheet**, and the **Yes, You Can! Guide** all give guidance on launching successful healthy food or non-food fundraiser including sample ideas and activities for fundraisers throughout the school year and detailed instructions for implementation.

Visit nyc.gov, search “Healthy fundraisers” for all three guides

Coalition for Healthy School Food offers alternative lunch menus (with lean, vegetarian protein options and limited processed foods) available free of charge in partnership with SchoolFood.

Visit schoolfoodnyc.org, click “view today’s menu” to see current alternative menus.

Red Rabbit is a NYC-based healthy school meal provider that focuses on delivering nutritious, made-from-scratch meals at or below the federal reimbursement rate to children of all ages. They are also committed to encouraging children to explore, learn, and grow healthy relationships with food that will last a lifetime through hands-on Food Labs in the classroom, kitchen or garden.

Visit myredrabbit.com



Kids from Red Rabbit’s program enjoy an opportunity to be outside, get dirty and have fun in the garden.
Credit: Red Rabbit

3

PROMOTING HEALTHY FOODS AND BEVERAGES
THROUGHOUT YOUR SCHOOL

Use a variety of structured and unstructured strategies to help students look at healthy eating in a new light.



Top: A student's submission to Preferred Meals Healthy Lunch for a Healthier Me! Kids Art Contest.

Credit: Preferred Meals

Bottom: Food Fight helps youth to think about food differently.

Credit: FoodFight

Ideas:

Offer nutrition education programs. Use either internal or external resources to offer students nutrition education programming in the classroom or as part of extracurricular activities. See Resources section for potential partners.

Offer culinary education to school food staff. Hold trainings on healthy food and beverage preparation for teachers and staff. See Resources section for potential partners.

Consider "wellness wakeup calls". Share health messages over the loudspeaker or as part of morning announcements.

Paint a mural. Have students paint murals with messages promoting healthy food and beverages around the school. Refer back to the resources on page 17 for art organizations you can partner with.

Run a healthy art contest. Have students create art to be used in a variety of settings. Every year, the Preferred Meals Healthy Lunch for a Healthier Me! Kids Art Contest receives submissions of drawings of nutritious school lunches from students. Winners have their artwork displayed on their school's food delivery trucks.

Visit preferredmeals.com/kids

Resources:

Coalition for Healthy School Food offers a weekly year-long nutrition education curriculum called Food UnEarthed: Uncovering the Truth About Food, a hands-on, discovery based look at food and food related topics. They also offer "Wellness Wakeup Calls," 10-30 second daily nutrition messages that can be read over the loudspeaker or in the classroom.

Visit healthyschoolfood.org

Edible Schoolyard NYC promotes hands-on learning in school gardens and kitchen classrooms, allowing students to gain the knowledge and skills to make healthy food choices. Through both workshops and observation opportunities at their demonstration schools—P.S. 216 in Brooklyn and P.S. 7 in Harlem—Edible Schoolyard NYC provides professional development and curriculum to help schools establish and improve garden and kitchen programs.

Visit edibleschoolyardnyc.org

FoodFight aims to revolutionize the way we eat and think about food. Through a variety of programs, FoodFight arms teachers, students, parents and school staff with the tools and knowledge they need to make healthier choices and become role models and agents of change for their families and communities. Along with traditional nutrition education, FoodFight addresses critical questions of food politics, consumer culture, and sustainability.

Visit foodfight.org

Wellness in the Schools (WITS) is a non-profit organization that provides food and fitness programming to low-income public schools through their Cook for Kids and Coach for Kids programs. WITS works in partnership with DOE, placing trained culinary graduates and coaches into school cafeterias, classrooms and recess yards.

Visit wellnessintheschools.org



Kids learn that eating right and exercise matters.

Credit: Coalition for Healthy School Food



A healthy plant-based entrée at a Harlem school: North African Gumbo.
Credit: Coalition for Healthy School Food

Success Story 7: Create a Rooftop Garden to Bring Healthier Options to the Cafeteria

Location: The Earth School, Lower East Side, Manhattan

Goal

To improve the school's garden, engage students in healthy eating habits, and connect the garden to the cafeteria.

Key Takeaways

- Programming and environmental changes go hand-in-hand
 - Engage as many people from the school community as you can to make changes possible
-



Students growing food at the Fifth Street Farm.
Credit: Fifth Street Farm

The Robert Simon Complex in the East Village encompasses two elementary schools, The Earth School and P.S. 64, and a middle school, Tompkins Square Middle School.

In 2007, the science teacher at the Earth School formed a “green committee” of students, teachers and other school community members to brainstorm and implement ideas to improve the school's garden, playgrounds and cafeteria food service. The school community and partners, Slow Food, The Horticultural Society of New York and Days of Taste, collaborated to expand the existing garden into an organic edibles garden that could be used by the whole building.

The idea was that if students grew their own veggies, they might be more likely to eat them! By 2008, the group was committed; they would construct a rooftop garden. Programming, such as bringing chefs into the classroom to teach kids how to prepare foods, was important, too.

Dedicated community leaders and local legislators contributed financial and legal support, including Resolution A funding. In September 2012, the 2,400 square-foot Fifth Street Farm opened. Designed by Michael Arad, the architect behind the 9/11 memorial, the rooftop farm helps students learn by growing. A portion of fruits, vegetables and herbs from the garden is used in the school cafeteria.

Visit 5thstreetfarm.org



Earth School students visit their rooftop farm to harvest rainbow chard and seasonal veggies for their on-site cooking program.
Credit: P. Ito, The Horticultural Society of New York

GREEN SPACES AND NATURE

Think About Your School

1. Are there green spaces?
2. If so, how do those green spaces look and feel?
3. If not, where could green be incorporated? Consider: play yard spaces, smaller outdoor spaces, fences, window ledges and maybe even a green roof.

Green spaces: Spaces, such as gardens, that provide exposure to a natural environment and support active living.

Schools can help students strengthen their relationship with nature—even if existing green space is limited. Gardening and planting can teach students about healthy eating and help them develop interpersonal skills by working with others. Working and playing in nature also offers an opportunity to be physically active. Even a small amount of green—through an indoor herb garden or flowering plant—can significantly brighten a classroom.

.....

WHY THIS MATTERS

- Students involved in school gardening programs have improved scores on standardized tests.²⁹
- Children exposed to natural environments show better motor coordination and concentration.^{30,31}
- Higher levels of outdoor activity reduce the likelihood of children developing myopia (nearsightedness).³²
- Students involved in conservation or gardening projects show significant improvement in psychosocial and overall health.³³
- Residents who volunteer at a community garden eat more fruits and vegetables than non-gardeners. Also, 56% of community gardeners eat at least five servings of fruits and vegetables per day, compared to 25% of non-gardeners.³⁴

Ideas:

Start a garden. Allow students to gain the knowledge and skills to make healthy food choices through growing their own fruits, vegetables and herbs.

Install a green wall. Work with your school community or an outside partner to design and install hardware to allow you to grow plants on the walls of your school.

Have students build their own planter boxes for classrooms, roofs or schoolyards. Let students plant their greens of choice.

Get creative about other ways to incorporate plants into the classroom.

I dream of a day when...

all students can get their hands in the dirt to grow, see and taste the fruit and veggies of their labor.

DEBI, THE BRONX



Resolution "A" funds at P.S. 6 went towards a new greenhouse.
Credit: NYC School Construction Authority



Helpful Tips

Engage your School Wellness Council, green team recycling club or sustainability coordinator to promote and find resources for a greener and healthier school. If your school does not already have a School Wellness Council, visit schools.nyc.gov, search "wellness council" You can also sign up for the NYC DOE's School Wellness Works Portal for assessment and action plan tools. Email wellness@schools.nyc.gov

Green walls, like those supplied by Woolly School Gardens, can grow greens at schools with limited outdoor space and sunlight.
Credit: Woolly School Gardens

GrowNYC's Grow Truck delivers gardening tools across the city.
Credit: GrowNYC



Resources:

Build it Green! NYC can provide free or low-cost materials for planter boxes or other projects.

Visit bignyc.org

Captain Planet Learning Garden Program offers free resources for teachers, including planting guides, cooking cart recipes and demos and lesson plans (tied to standards) for kindergarten through 5th grade. It also funds small grants for environmental stewardship projects.

Visit captainplanetfoundation.org

The **Daffodil Project** has worked with more than 100,000 students, parks and gardening groups, civic organizations, corporate volunteers and other New Yorkers to plant nearly five million free bulbs citywide. Bulbs are available for planting each fall.

Visit ny4p.org/daffodil-project

Fiskars Project OrangeThumb provides grants, tools and hands-on garden makeovers.

Visit www2.fiskars.com/Community/Project-Orange-Thumb

The **Fruit Tree Planting Foundation Program** promotes environmental stewardship by donating orchards to communities and schools.

Visit ftpf.org/apply.htm

Grow to Learn NYC promotes sustainable gardens in NYC public schools. Apply for a mini-grant to start a school garden or find resources, such as how-to-garden guides. Extra support and resources are available to schools located in the South Bronx, East and Central Harlem and Central Brooklyn.

Visit growtolearn.org

GrowNYC's Grow Truck is a free mobile tool-lending service that traverses all five boroughs to deliver gardening tools, plants and soil and advice to schools, community gardens and block associations.

Visit grownyc.org/openspace/growtruck

The **Horticulture Society of New York (The Hort)** has been designing and building school gardens for over 50 years. They host workshops with schools and communities.

Visit thehort.org

Kids Gardening funds gardening programs that share the common vision of a greener future and powerful impact. The organization offers grants and online resources.

Visit grants.kidsgardening.org

Lowe's Toolbox for Education funds school gardening and landscaping projects.

Visit toolboxforeducation.com

NY Sun Works builds innovative kindergarten through 12th grade science labs in urban schools. Their Greenhouse Project Initiative uses hydroponic farming technology to educate students and teachers about the science of sustainability while promoting critical thinking and collaborative work.

Visit nysunworks.org

New York City Department of Parks and Recreation GreenThumb (GT) supports community and school gardens throughout NYC. Monthly workshops cover gardening basics and more advanced farming and community organizing topics. GT currently serves schools through partnerships with the City Parks Foundation's Learning Gardens and Grow to Learn NYC.

Visit greenthumbnyc.org

The **Trees for Wildlife from the National Wildlife Federation** involves older students in science-based activities by teaching them how to plant and care for trees. The organization provides free native trees to communities and schools.

Visit nwf.org, search "Trees for Wildlife"

Woolly School Gardens can help with improving children's nutrition and wellness. Woolly Pockets can be hung on a wall or a fence and can instantly transform a bare space into a luscious green one. Simply plant a seed or a bloom in a dirt-filled pocket, add water, and watch your green wall grow.

Visit woollyschoolgarden.org



Top: A NY Sun Works Greenhouse Project Laboratory built for hydroponic farming in urban schools. The laboratory uses a hands-on approach and operates as an integrated part of the school's Environmental Science Education curriculum.

Credit: NY Sun Works

Bottom: Students at Astoria's Bryant High School led the way, working with faculty and local organizations to make their new green roof a reality. The Hort and Global Kids partnered with the school.

Credit: P. Ito, The Horticultural Society of New York

Success Story 8: Creating a School Garden

Location: Jonathan D. Hyatt School (P.S. 154), Mott Haven, The Bronx

Goal

- To increase healthy eating
- To create more space for learning

Key Takeaways

- Partner with experienced organizations
 - Keep timing expectations realistic; pace yourself
-



The chickens, lovingly called “the ladies,” enjoy the garden.
Credit: P.S. 154

When students and staff at the Jonathan D. Hyatt School (P.S. 154) look out their windows, they see an expressway. P.S. 154 decided to create a fruit and vegetable garden and chicken coop to improve the school grounds and create more space for classes, afterschool programs and summer camps. The school’s Gardening Afterschool Club and members of the City Year program help to oversee the garden and chickens during the school year, and campers at the YMCA Summer Quest program at the school look after them during the summer. Additionally, teachers use the garden as an outdoor classroom to educate students about healthy eating and provide an opportunity to be more active. Now, the garden and chicken coop are a source of pride for students, parents and the broader community.

Creating a robust school garden does not happen overnight. The school built its garden little by little over three years planting, building, reflecting and changing course as needed. Grow to Learn, Just Food, City Year and a number of school gardening organizations provided funding and ongoing technical assistance. This included overseeing the approval process from the DOE and working with the school to create an annual garden work day with the community, when the bulk of the work for the garden that year gets done. The school also worked with the Whole Kids Foundation to create a fundraising campaign through Indiegogo.

The school plans to continue expanding the garden in the years to come. Also, it hopes to find new ways to connect the garden to the classroom, and to the cafeteria by partnering with the DOE SchoolFood’s Garden to Cafe program and to create a student-run farm stand.



Greens line the garden at PS. 154 in Brooklyn. Everything from lettuce to strawberries and herbs to squashes are cultivated here. Credit: PS. 154



GETTING TO AND FROM SCHOOL

Active transportation: The act of biking, walking or using other methods of transportation that use human energy and effort to get from one place to another.

.....

In the US, active commuting to and from school dropped from 48% to 13% between 1969 and 2009.³⁵ However, across the country, it is now a growing trend. Between 2007 and 2012, walking home from school increased from 16% to 20% across the country.³⁵

Traffic safety concerns may be a major barrier to students' active commutes.^{36,37} Although NYC has lower rates of child injury from motor vehicles than the rest of the country,³⁵ motor vehicle related deaths among child pedestrians and cyclists remain the largest cause of injury-related death for children aged 1-12.³⁸ In 2012, 804 elementary and middle school student pedestrians across the City suffered from motor vehicle related injuries.³⁹ This is a concern city-wide, but unfortunately, low-income neighborhoods and communities of color have higher rates of pedestrian crashes.³⁷

I dream of a day when...

all students can walk to school enjoying all the sights, sounds and beauty of nature in their neighborhoods and make lasting memories of their childhood days.

JODY, STATEN ISLAND

WHY THIS MATTERS

- Overall, students who walk to and from school tend to get more daily physical activity than those who take a bus or car.^{38,39}
- We know that when students get physical activity they also do better in school.³⁵
- Active commuting to and from schools is inversely related to obesity.⁴¹
- Teenagers who bike or walk to school get more daily physical activity, watch less TV and are less likely to smoke than their peers who are driven to school.⁴²

1

PROMOTING SAFE COMMUTING TO SCHOOL

There are many ways that you and your school community can improve traffic safety and make active commuting an appealing option for students.

Ideas:

Form a “Safe Routes to School” Committee. Think about who you can pull together from the school and surrounding community. See the “Making it Happen” section for some tips on engaging stakeholders and creating a plan.

Assess the neighborhood. Take advantage of available tools to assess how suitable the area around your school is for active transportation.

Implement a Neighborhood Slow Zone. Neighborhood Slow Zones are small, defined areas where the speed limit is reduced to 20 mph and traffic calming measures, such as speed bumps, lane narrowing and sidewalk extensions are put in place to change driver behavior.

Request a crossing guard. Principals can contact the commanding officer of their local New York Police Department precinct to request a crossing guard.

Hold a walk or bike to school day. Every year, in early October, schools across the City participate in International Walk to School Day. Research shows that one-time events like Walk or Bike to School Day can encourage students to walk or bicycle to school even weeks after the event.⁴³

Organize a walking school bus. Across the country, students are walking to school in groups, with at least one adult leading the crew. Anyone can lead the charge—parents, community leaders or school staff.

DID YOU KNOW?

A walking school bus was used to address chronic absenteeism and tardiness for dozens of schools in Springfield, Massachusetts.⁴⁴

The Steinway School in Astoria competed against schools across the globe in a walking competition where students could swipe a keycard at any “Beat Box” location installed by DOT to collect points on their walks. Credit: NYCDOT



Resources:

DOT has many useful resources for schools and community members:

- **Safe Routes to School Initiative** focuses on safety improvements near city schools with the highest accident rates. One of the main objectives of the program is to enable and encourage children, including those with disabilities, to walk and bicycle to school. High priority areas receive traffic calming improvements. View the schools on past and current priority lists and get ideas for safety improvements to bring to your community.
[Visit nyc.gov, search "safe routes to school"](#)

- There are many **traffic calming measures** that can be implemented or you can apply to implement a **Slow Zone** near your school. To alert DOT to safety conditions and/or request a feasibility study be done to assess traffic safety, reach out to your DOT Borough Commissioner's office.

[Visit nyc.gov/dot, search "pedestrians" or "contact DOT"](#)

Work with your local community board to apply for a Slow Zone in your neighborhood.

[Visit nyc.gov, search "slow zones"](#)

Request a speed camera by emailing the DOT or filling out a form at:

transalt.org/speedcameras

- The **Neighborhood Walkability Checklist** is a user-friendly tool you can use to assess if the neighborhood around your school is a friendly, safe place to walk.

[Visit nyc.gov, search "neighborhood walkability checklist"](#)



Above: Before, crossing Northern Boulevard at 61st Street in Woodside, Queens was a challenge for the P.S. 152 school community.

Right: After, DOT used strategies to calm traffic, reduce speeding and shorten pedestrian crossing distances.

Credit: NYCDOT



The **National Center for Safe Routes to School** provides data, tips for assessing your streets and examples of how schools and communities across the country are building robust safe routes to school programs.

Visit saferoutesinfo.org

The **Pedestrian & Bicycle Information Center** has great checklists for neighborhood walkability and bike-ability.

Visit pedbikeinfo.org

The **Safe Routes to School National Partnership** improves quality of life for kids and communities by promoting active, healthy lifestyles and safe infrastructure that supports bicycling and walking. They advance policy change working with a network of more than 700 partner organizations; and share their expertise at national, state and local levels.

Visit saferoutespartnership.org

Transportation Alternatives (T.A.) promotes active transportation in NYC by working to secure safe streets to walk, bike and access public transportation. T.A. works on local bicycle and pedestrian safety campaigns and can help local groups through the process of applying for infrastructure and enforcement resources such as Play Streets, Slow Zones, CityRacks and CityBenches. Also, check out their Speeding Survey and Neighborhood Traffic Monitoring kit.

Visit transalt.org, click on “get involved”

Vision Zero is a mayoral initiative to end pedestrian traffic deaths and serious injuries on our streets, most notably the implementation of the 25 MPH speed limit and the initiation of at least 50 safety projects per year at intersections and corridors citywide. New York City recently gained the legislative authority to install 140 speed cameras to discourage reckless driving and increase safety where the city’s most vulnerable citizens walk, including near schools. Learn more about Vision Zero and view the Vision Zero Interactive Map.

Visit nyc.gov, search “vision zero”

Walking School Bus has resources for how to get a walking school bus started in your school.

Visit walkingschoolbus.org

DID YOU KNOW?

DOT makes school traffic safety maps for elementary and middle schools with 250 students or more. There you can find the location of designated school crosswalks, speed reducers and all-way stops. Look for your school’s map by visiting nyc.gov, search “school traffic safety map.”



Street Safety Managers helping pedestrians and cyclists stay safe.
Credit: NYCDOT

Success Story 9: Achieving Traffic Safety Improvements

Location: CASTLE Middle School, Lower East Side, Manhattan

.....

Goal

To improve walkability and safety for all community members, especially local students who frequently cross the intersection.

Key Takeaways

- Build a diverse coalition that includes community leaders and elected officials
 - Persist despite barriers
 - Leverage news events to create urgency and to push harder for what you need
-



Delancey Street, pictured before Dashane's death, was a bleak and dangerous intersection for pedestrians. Credit: NYCDOT

In early 2012, 12-year-old Dashane Santana was fatally struck by a minivan while crossing Delancey Street on her way home from CASTLE (Collaborative Academy of Science, Technology and Language Arts Education) Middle School on the Lower East Side. DOT data indicate that 118 pedestrian injuries and six pedestrian fatalities occurred between 2006 and 2011 in NYC. Half of the pedestrians killed were crossing on the walk signal.

In September 2011, State Senator Daniel Squadron and Community Board 3 convened the Delancey Street Safety Working Group. The group made up of community and government leaders met repeatedly with DOT and the NYPD Local 7th Precinct. Requests of the group included increased crossing times, crossing guards and signs directing pedestrians to safe crossings. Many of these changes were under discussion when Dashane's death occurred, accelerating the collective response and resulting in significant safety improvements. The diversity of working group participants allowed for solutions-driven innovations, buy-in from all necessary stakeholders and quick implementation.

In the end, DOT added countdown clocks to crossings, increased pedestrian crossing time, installed concrete barriers at the base of the bridge and extended the median at crossing areas. Crossings were shortened via curb extensions, paint markings and planters.

Additional improvements were made to traffic patterns and access to the Williamsburg Bridge including better lane markings, and turn restrictions. There is now an additional 21,000 square feet of pedestrian space, including a service road that was transformed into a space for pedestrians.

The community remains pleased with the changes and credits the results to committed leaders, community input and persistence.



Since Dashane Santana's passing, Delancey Street intersection has transformed, with more time to cross the street and protected spaces for pedestrians.
Credit: NYCDOT

2 PROMOTING SAFE BIKING



Kids who grow up with parents who are active are likely to be active themselves. A mom enjoys cycling on the two-way bike path along Plaza Street in Brooklyn. Credit: NYCDOT

Biking is a growing trend in NYC. With a three-fold increase in bicycle trips between 2003 and 2013, there are now 342,000 bicycle trips each day in NYC. With the dramatic increase of riders, risk of serious injury actually dropped by 74% from 2001 to 2013, as cycling became an integrated and safer part of the City’s transportation system.⁴⁵

Ideas:

Promote and expand bike lanes. Bike lanes are available on many streets to enhance safety for riders.

Offer bike parking. Install bike racks on-site for secure bike storage or nearby to promote bicycling among students and staff.

Implement biking education. Make sure students learn the rules of the road. See Resources for some partners that can help to teach important bike safety tips to cyclists.



Bike New York’s free after-school program teaches students 10 years or older the mechanics of riding a bike, the rules of the road, best practices for riding in a group and on the streets, and—of course—the joy and freedom of biking. Credit: Bike New York

Resources:

Bike New York facilitates and promotes cycling in all five boroughs of the City through education and public events and in collaboration with community organizations and municipal agencies. Their Bike Driver's Ed School Program, designed to fit into a single period class schedule of 40 to 60 minutes, educates children ages 5 to 18 years on safe cycling and etiquette.

Visit bike.nyc

Bikeology Curriculum and Parent Guide is a free bicycle safety curriculum for teachers and after-school professionals to teach safe bicycling to students of all levels. It was created, implemented and evaluated by the Society of Health and Physical Educators with support from the National Highway Traffic Safety Administration.

Visit shapeamerica.org, search "bikeology"

DOT has many programs to help promote safe biking across the city.

- **Bike Lanes** are available on many streets to enhance safety for riders. Work with your local community board or contact DOT to improve bicycling conditions in your community.

For a free NYC Bike Map, visit your local bike shop or visit nyc.gov/dot, search "bicycle map" or call 311

Taking public transit is also considered active transportation because it includes walking or biking to and from bus and subway stations.

Protected bike lanes, when paired with a traffic island to shorten crossing distances such as along Manhattan's 1st Avenue, increase safety for all road users including cyclists, drivers and pedestrians.

Credit: NYCDOT





Safety City teaches students street safety in a hands-on, interactive way.
Credit: NYCDOT

– **CityRacks** provides bicycle racks on sidewalks in all five boroughs. In addition to sidewalk bicycle racks, Bike Corrals allow racks to be installed in clusters in the parking lane of the roadway, keeping sidewalks clear in congested areas. There are over 21,000 bike racks and over 40 bike corrals throughout the City with many more being planned. Work with your community board to apply to suggest CityRack and Bike Corral locations in your neighborhood.

Visit nyc.gov, search “cityracks” or “bike corrals”

– **Helmet Give-Away Program** distributes free bicycle helmets at events throughout the five boroughs. Find a Helmet Give-Away event on the NYCDOT Events Calendar.

Visit nyc.gov/dot, search “helmet giveaway”

– **The Bike to School Program** encourages students, families and educators to bicycle as a safe, healthy and fun way to get to and from school. Through the program, DOT works with schools and community groups to designate safe Bike to School routes, implement in-class curriculum and recommend street safety improvements.

Visit nyc.gov/dot, search “bike to school”

– **Safety City** is one of DOT’s safety education programs. Instructors teach students, in a hands-on way, what they need to know to make safe choices on their active commutes.

Visit www.nyc.gov/dot, search “safety city”

Recycle-a-Bicycle partners with Brooklyn schools on the Kids RideClub.
Credit: Recycle-A-Bicycle



Recycle-A-Bicycle utilizes the bicycle as a resource to foster youth development, environmental education, community engagement and healthy living. Recycle-A-Bicycle offers support to schools with starting after-school bicycle clubs, establishing a fleet of bicycles to incorporate into a physical education program, or starting an in-class or after-school bike shop.

Visit recycleabicycle.org



Kids are all smiles with their free helmets courtesy of one of the DOT's helmet giveaway events.
Credit: NYCDOT

Success Story 10: Fostering a School Biking Culture

Location: Cypress Hills Community School (P.S. 89), Cypress Hills/East New York, Brooklyn

Goal

To actively support student biking to, from and around school

Key Takeaways

- Shifting school culture around wellness takes energy, dedication and role-modeling
- Resources are available to increase demand for biking
- Teachers are strong change agents



P.S. 89 obtained this bike fleet for their school from Recycle-A-Bicycle.
Credit: P.S. 89

Cypress Hills Community School (P.S.89) is a school that takes wellness seriously. Many of the teachers value physical activity and biking to school. With support of the Brooklyn District Public Health Office (BKDPHO) Healthy Schools Brooklyn program, the teachers began engaging students around biking.

In 2011, the BKDPHO worked with 6th graders to conduct street audits and found that their neighborhood was a challenging place to walk and bike as the school is situated right on busy Atlantic Avenue.

To address these obstacles, teachers and the BKDPHO began planning “safer routes for bikes” events, choosing routes with less traffic and one-way streets, as well as hosting bike clinics after school to prepare students for riding safely on the streets. Bike New York offered Bike Safety Assemblies, giving students a chance to learn about bicycling basics and street safety skills. On-site helmet fittings were coordinated with the DOT. The BKDPHO and Recycle-A-Bicycle coordinated the use of a loaner bike fleet for students who did not have bikes.

The 2011 Bike-to-School Day was a one-time event with 34 students participating from P.S. 89 and a neighboring school. The 2012 Bike-to-School Day had 29 students from P.S. 89 and a neighboring school and was supplemented by 3 additional days of “bike trains” (when students meet at different points along the route and ride together). Students were excited, but they and their parents still felt uncomfortable with biking on the streets. In 2013, the school took a different approach and organized after-school Bike-to-the-Park events.

While this project did not involve physically transforming the streets (yet!), it has created a cultural shift in the school. Thanks to Recycle-A-Bicycle and tools from the BKDPHO, one teacher worked with her students on bike-repairs in the classroom. The students are also involved in leading fundraisers to support spring biking activities. A demand for biking is growing among P.S. 89 students and it would not be surprising to see them spearheading street-improvements—and biking to school just like their teachers.



Bike New York shows a child how to get started on his bicycle. P.S. 89 partners with organizations like Bike New York, to promote biking to school and in the community.
Credit: Bike New York

Do-It-Yourself

Have a group of students who want to use art to promote walking in the community? Know a local artist?

There are a lot of creative ways to bring art to the streets of NYC.

1. Visit the DOT's Art site for inspiration.
2. Talk to local businesses that might have the rights to wall space or talk to your community board about opportunities to bring art to public spaces.
3. See page 17 for information on partners that can help bring art to the streets.

3 BEAUTIFYING THE STREETScape

Beautiful clean, and appealing streets encourage walking and biking (or active transportation) to school. Work with students to transform the sidewalk experience near their school.

Ideas:

Control trash. Litter is unappealing and attracts pests. The good news is that you can do something about it.

Create public art. Public art created by students can be used to beautify streets and share useful messages. For example, middle school students in East Harlem created 28 signs with haikus and illustrations to encourage residents to clean up after themselves and their dogs. Make sure you work with your local community board to get approval for posting the signs or art.

Plant trees and flowers. The presence of trees in urban areas, along sidewalks, has been shown to improve traffic safety⁴⁶ as well as promote better emotional health.

Beautify your commute. Make your commute more vibrant by beautifying spaces near your subway or bus station.



"Intersections Humanized" was created by young artists in Groundswell's Summer Leadership Institute. The mural was made possible by a partnership between DOT, Pitkin Avenue BID, and the Brownsville Community Justice Center. Credit: NYCDOT

Resources:

MillionTreesNYC aims to plant and care for one million new trees across the city's five boroughs. Your school can request street trees or request permission to plant your own street tree. You can also apply for a mini-grant which funds groups up to \$1,000 for tree stewardship projects. Visit the site for grant eligibility requirements and to see what school groups around the city have been funded to work on. Also, MillionTreesNYC encourages schools to care for street trees, suggests planting flowers around the trees, and offers tips, workshops, and other events that you and your school can get involved in.

Visit milliontreesnyc.org

Bronx Community Charter School students care for trees in their neighborhood through the MillionTreesNYC community tree planting initiative.
Credit: Bronx Community Charter School



NYC Department of Sanitation (DSNY) has multiple programs to help control litter in your neighborhood.

- **Adopt-A-Basket** is a program in which individuals or organizations (schools!) can volunteer to monitor an existing litter basket to help prevent trash overflow. Submit a request online or contact your district’s city council member to sponsor public litter baskets for your neighborhood.

Visit nyc.gov/dsny, search “adopt basket”

- **Public Litter Baskets** can be requested from DSNY. Request a public litter basket to be placed on a street corner or report an overflowing litter basket online.

Visit nyc.gov, search “litter baskets”

Bronx Community Charter School students care for trees in their neighborhood through the MillionTreesNYC community tree planting initiative. Credit: Bronx Community Charter School



DOT

- **DOT Art** partners with community organizations and artists to showcase murals, sculptures and other interventions on DOT property, such as plazas, fences, barriers, bridges and sidewalks.
[For more information about the application process, visit nyc.gov/dotart](https://nyc.gov/dotart)
- **Bus shelters**, all of which include benches, are installed by DOT. Review criteria online and submit your recommendation for a new bus shelter via email.
[Visit nyc.gov/dot](https://nyc.gov/dot), search “bus shelter” or email streetfurniture@dot.nyc.gov

This mural adjacent to P.S. 75 in the Bronx is part of the Barrier Beautification program. It sets off the bike lane with a colorful design. DOT Art partnered with FIT student Brittany Falussy and NY Cares to present “Site Scene,” a series of painted concrete barriers along Bronx’s Bruckner Boulevard and Bryant Avenue.
Credit: NYCDOT



Success Story 11: Beautifying a Bus Shelter

Location: Curtis High School, Barrett’s Triangle, Staten Island

Goals

To improve public perception of a neighborhood bus shelter, improve the pedestrian experience and promote active living and healthy eating.

Key Takeaways

- Students’ voices can activate change
 - Art can make a difference
 - Diverse partnerships are important
-

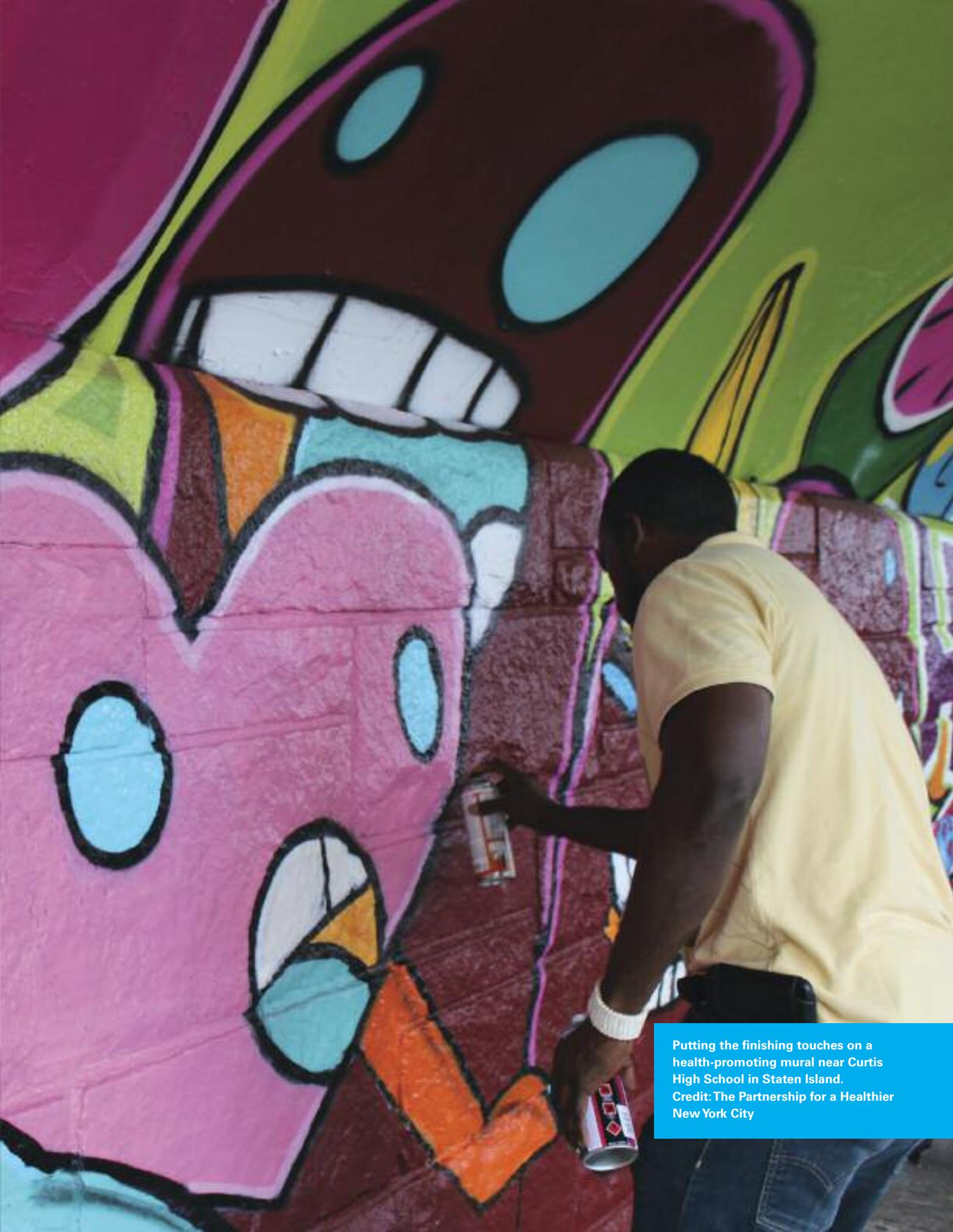


Students worked with artists and community partners to promote health and well-being in a once dreary bus shelter.
Credit: The Partnership for a Healthier New York City

Students in the Global Kids Program at Curtis High School on Staten Island worked with local artists to transform a busy, but drab, bus shelter near St. George into a bright and inspiring art installation. The idea was born out of an active design workshop where students expressed concerns about the bus shelter not being a safe place. The shelter now stands as a symbol for replacing negativity with positive messages, such as exercising and eating healthy. The transformation has improved the commuter and pedestrian experience for the thousands of people who pass through the area every day—most importantly, the students.

The mural was designed by comic book artist Scott Wegener and artist Gano Grills. The students involved in the mural project participate in the Teen Action afterschool program at Curtis. The program was sponsored and staffed by Global Kids, the non-profit educational organization that promotes global learning and youth development in urban schools.

The project was supported by the NYC Department of Parks and Recreation, DOT and DOHMH and with a \$3,500 grant from the NYC Department of Youth and Community Development. The project was made possible by the spirit and determination of the students who identified a need and were bold enough to dream about what could be.



Putting the finishing touches on a health-promoting mural near Curtis High School in Staten Island. Credit: The Partnership for a Healthier New York City



MAKING IT HAPPEN

Organize Your Core Team

Successful projects engage a wide array of stakeholders. Ask yourself, “Who will be impacted by this project?” and “Who are the decision makers?” Include those people from the beginning. Consider your school wellness council, student groups, your Community Education Council, PTA, School and District Leadership Team and community members.

How would you redesign the spaces near and around your school to improve the health of the students, staff and families in the community? Where would you focus the project? What resources would you need and whom would you partner with to make it happen? This section provides a roadmap for undertaking a project at your school.

.....

STEP 1: ASSESS

Brainstorm. Host meetings with school and community stakeholders to understand the needs of the school community. See Appendix A for “The Building & Visioning Community Workshop” for help with visioning.

Use existing data. Review past health assessments and programs or policies that have been adopted by your school or in the surrounding community. Review existing data (e.g., eating habits, activity levels, walkability, etc.) for your community presented in neighborhood profiles and interactive databases (Epiquery and Environment and Health Data Portal).

Visit nyc.gov/health, click “data and statistics”

Do an environmental scan. Take a walk around your school and surrounding neighborhood. Record which spaces promote and hinder healthy lifestyles. Use the **Visual Checklists** in Appendix C, checklists on page 48, or suggested questions listed in other sections of this guide. Or, simply jot down general ideas and take pictures.

STEP 2: PLAN

Prioritizing ideas to select a project

Review outcomes from your brainstorming sessions, community conversations and assessments to figure out your project’s focus.

Get Inspiration from case studies in this toolkit.

I dream of a day when...

all schools practice a "health in all policies" approach, linking learning in the classroom with getting active and eating healthy.

LISA, BROOKLYN

Create a Plan:

Write a vision statement—A couple of powerful sentences that describe your goals and process and why the project matters.

Develop a work plan with goals, key activities, partners and timelines.

- Think about all necessary steps to complete your project (e.g., planning and building support for the project, getting approvals, obtaining funding).
- While it's good to have an aggressive timeline, allot extra time as many projects can take longer than originally anticipated.
- It's ok if the work plan changes over the course of the project.

Consider your current bandwidth and see what resources you already have and what's needed to complete the project (e.g., money, staff, designers/artists, materials, experts, etc.).

Develop an outreach plan

- Create and utilize talking points, fact sheets, PowerPoint presentations and other materials to explain why this project is needed, how it benefits the community and how others can get involved.
- Engage outside stakeholders through letters of support, petitions and sign-on letters.
- Coordinate with City agencies and other government entities to leverage existing programs and resources.

Create an evaluation plan. Evaluation is important for knowing if your project is working as well as to measure outcomes. Evaluation data is also useful for funding applications and requests and to strengthen success stories.

Set standards for success

- What does a successful project look like to you, students, teachers, staff and parents?
- What are the primary and/or secondary outcomes of your project e.g., health status, student academic achievement; changes in knowledge, attitude or beliefs?

Know what you need to track

- What do you want to be able to say once your project is complete?
- What information might funders or other stakeholders require you to collect?

S.M.A.R.T. Goals

Make your work plan goals **S.M.A.R.T.**

specific, measurable, achievable, relevant and time-based

This will help focus your project and define success measures.

Example:

By the end of the school year, our school's Active Design Taskforce will transform one unused classroom space into a fitness center.

Need Evaluation Help?

- Contact faculty at local colleges or universities
- Contact the DOHMH's Active Design staff
Email activedesign@health.nyc.gov
- Check out The Kellogg Foundation Logic Model Development Guide
Visit wkkf.org, and search "logic model development guide"
- Check out the Centers for Disease Control and Prevention website for evaluation tips
Visit cdc.gov/healthyyouth/evaluation

Choose a methodology. Once you have nailed down answers to the above questions, consider the best way to collect the above data:

- Quantitative methods (e.g., surveys, data collection, etc.),
- Qualitative methods (e.g., focus groups, quotes, photography or photovoice, etc.)
- When do you want to collect data? Before and/or after the project? Part of the way through?

Keep a record

- Document the process, successes/challenges, lessons learned and solutions by taking ample notes, photos, video and audio.
- Keep a written account of the resources used for the project.
- Think about how you will share the results during and after the project.
- At the end of the project, consider scheduling time to reflect with the core team and external stakeholders about the process.

STEP 3: IMPLEMENT YOUR PROJECT

Meet or connect regularly with core team and extended stakeholders

- Assign and revisit roles and responsibilities when needed.
- Regularly review work plan progress and any evaluation data collected along the way.
- Provide regular updates on newsletters and social media. Twitter is an excellent way to reach elected officials and reporters. Facebook and Instagram are best for community members and organizations.

Build support with elected officials and outside organizations

- Be strategic and consider how each stakeholder can contribute to your project before you meet with them.
- Hold meetings with stakeholders to ask for support and/or project approval if applicable.
- Regularly share outreach materials.
- Potential political stakeholders to consider engaging:
 - **Local Officials**
Consider setting up meetings with your local City Council member, State Senator and Borough President to build support. Leverage common goals. Some City Council members engage in a participatory budgeting process as part of the City budget.

Visit pbny.org

- **Community Boards**

Many active design proposals, including Slow Zones, Play Streets and bike lanes, will involve review by your local community board.

Find out more at nyc.gov, search for "Community Boards"

Find Resources

Potential sources of funding

- **City Council and Borough Presidents Offices**
Resolution A (Reso A) funding is made available through offices of City Council members and Borough Presidents for school capital enhancements or improvement projects.
[Visit nycsca.org/Community/Programs/Pages/ResolutionA.aspx](http://nycsca.org/Community/Programs/Pages/ResolutionA.aspx)
- **Community Education Council (CEC) Capital Plans**
CECs hold annual capital planning meetings in December where schools can ask for funding for specific projects. You can also submit an input sheet for your CEC to submit to the NYC School Construction Authority in January.
[Visit schools.nyc.gov/Offices/CEC](http://schools.nyc.gov/Offices/CEC)
- **DOE School Wellness Council (SWC) Grants**
The annual SWC Grant Program funds and supports schools to create or strengthen SWCs that can support active design projects in your school.
[Visit schools.nyc.gov/Academics/FitnessandHealth/WellnessCouncil](http://schools.nyc.gov/Academics/FitnessandHealth/WellnessCouncil)
- **Private fundraising**
Work with your community to develop fundraisers. Consider a crowd-funding website like Kickstarter, IndieGoGo! or IOBY, or host a (healthy!) fundraiser at your school.

Find extra volunteers to help you ‘make it happen’

- **New York Cares** is the City’s largest volunteer organization running volunteer programs.
[Visit newyorkcares.org](http://newyorkcares.org) or email community.partners@newyorkcares.org
- **NYC Service** connects community organizations and projects with potential volunteers. Their comprehensive list of community based organizations can also be used to identify potential project partners.
[Visit nyc.gov/service](http://nyc.gov/service)

STEP 4: SHARE

Meet or connect regularly with core team and extended stakeholders

- Consider writing a report about the project process and evaluation results as well as challenges.
- Issue press releases, including joint press releases with partners, at key project milestones.
- Submit an op-ed or letter to the editor. (See Appendix B for tips)
- Use social media to share updates and events.
- Be sure to recognize the contributions of all who helped make the project a success.
- If you are a DOE school please work DOE’s central office to coordinate these efforts.

I dream of a day when...

schools are centers of physical activity for students, school staff, parents and the broader community.

EMMA, THE BRONX

Cultivate a Group of Stakeholders

Consider developing a secondary group of stakeholders that meets less often, but participates in either an advisory role or when all hands on deck are needed.



The Building and Visioning Community Workshop

By: James Rojas, Founder of "Place It!"

Use this fun and easy workshop to start to build a common vision for the school environment you want to create together with your school community. This activity can be done with people from all walks of life.

.....

Collecting Materials

- Work with students to gather materials well in advance of the workshop.
- Materials are also available from Materials for the Arts. See page 17 to learn more.
- Borrow materials from the DOHMH Active Design team
[Contact](#)
activedesign@health.nyc.gov

WORKSHOP GOALS

- Participants build a model of their ideal environment
- Use art to inspire creativity
- Increase team building skills and empower participants

WHAT YOU NEED FOR THE WORKSHOP

- 45-60 minutes
- Materials
 - Construction paper
 - Colorful tactile materials (e.g., shampoo tops, Popsicle sticks, pipe cleaners, yarn, cloth flowers, hair rollers, and plastic game pieces)
 - Camera
- Facilitators (e.g., teachers, parents, community leaders, or administrators)
- Participants
 - This curriculum can be used with adults, young adults and children.
 - Consider: parents, District Leadership Teams, students, after school groups, teachers, community members or a combination.



Set Up (5-10 minutes)

Workshops can be facilitated indoors or outdoors. Use tables, chairs or even the floor.

1. Have participants get into groups of 5-8 people.
2. Give each participant a sheet of construction paper on which to build.
3. Place the objects/building materials where participants can easily access them.
 - For children, separate and place the objects on the tables in front of them.
 - For adults, place all the objects in one central area.

Building safer streets through play
with Transportation Alternatives.
Credit: James Rojas



Students gather materials to express their visions—green yarn becomes grass, blue poker chips become the ocean, and hair rollers become apartments or office buildings.

Credit: James Rojas

Frame the activity (10 minutes)

First, share some facts about urban planning with the entire group. For example, “City planners build parks, streets, neighborhoods, etc. Cities need places for residents to sleep, work, and play.” Explain that buildings can also be designed to promote health, safety or comfort. Explain that as part of this activity, they will be required to think like an urban planner.

Ask a question and build (25-45 minutes)

Depending on the time available and age of the audience, use one or both of the following exercises.

Exercise A: Independent visioning (20 minutes)

The first exercise allows participants to work individually to build and communicate their vision to the group.

1. Question: Think of a question that will get participants to think about how they interact with the spaces they occupy including buildings, neighborhoods, and the city, and to envision their ideal spaces:

- What does your city look like?
- What is your favorite childhood memory?
- What does your favorite park look like? School?
- What does a healthy school look like?
- What would your ideal street look like?

2. 10-Minutes to Build: At their tables, have participants sort through the “building materials” and create their ideal vision in response to the question asked. Participants will use their imaginations and reflect on their experiences, needs and desires. **Note:** *If participants need help, ask vague questions about their favorite color, favorite activities or what they are trying to construct.*

3. 1-Minute Share-Out: Participants will then give a one-minute presentation on their project to the entire group. Ask them to describe objects they used, what they built and what it means to them. After each participant presents his or her idea, the facilitator should summarize and applaud them for sharing. The facilitator should also assign a note-taker to capture all the ideas. **Optional:** *Participants can share their creations with their table. Participants write one word that describes their vision on a large Post-it. Gather Post-its, post in a central location and share a few examples. This is also an option if the group is too large for each participant to share with entire room.*

To learn more about James Rojas’ Building and Community Workshop, check out the following resources:

- Rojas, James (2013) “Children Are Natural-Born Urban Planners!” *Journal of Applied Research on Children: Informing Policy for Children at Risk*: Vol. 4: Iss. 2, Article 22. Available at: digitalcommons.library.tmc.edu/childrenatrisk/vol4/iss2/22
- James Rojas: City as Play, 6-Step Design Workshop video on Vimeo. Visit vimeo.com, search “James Rojas”



Students choose from everyday objects to build their dream city.
Credit: James Rojas

Exercise B: Let's take this a step further with some group visioning (25 minutes)

If time allows, this exercise asks participants to build a collective solution as a group.

- 1. Question:** The question for the group activity can be an extension of, or slightly different from, the question used for the individual activity.
- 2. 15-Minutes to Build:** Once you have the question, ask the groups to start with a team discussion and combine their best ideas for building a new model together. Participants work together and can either combine their models or start from scratch. (15 minutes)
- 3. 2-Minute Share Out:** Each team will have two minutes to present their model to the entire group. They should walk through the elements of their model and how it answers the question posed at the beginning of the exercise. The facilitator should synthesize each group's presentation and allow for Q&A. The facilitator should assign a note taker and person to take photos of each group and their model. (10 minutes)

Group Discussion (5 minutes)

The facilitator should synthesize the findings from the exercise(s), highlighting common themes. They should ask the participants to share what they have learned throughout the process about themselves, each other and their relationship to their environment.

Next Steps

The next phase can occur the same day or as part of an ongoing visioning process. In this next phase, groups will apply what they learned in the visioning exercise to analyze their school or community.

Groups receive a map, plan or photos of the school or community and write or draw on specific improvements that they want to see implemented (e.g, trees, flowers, lanes, speed bumps, shade, special destinations). This data can be used toward creating an action plan for change.



Adults can dream too! In NYC, James Rojas gets the grown-ups to build their favorite childhood memory.
Credit: James Rojas

Getting the Word Out

Letters to the Editor are typically in response to an article that was previously published in a newspaper, news magazines or other entertainment periodicals.

Opinion editorials (Op-ed) are generally on a topic important to the writer that may or may not be relevant to current events. Op-eds are typically written by the news publication's editorial board, but some publications will publish submissions from readers.

.....

GENERAL TIPS

- Most news outlets have their own rules about word counts, recommended structure and submissions process. Be sure to get this information before writing your piece.
- Remember, less (words) is usually more.
 - Be passionate, but do not overuse flowery language.
 - Eliminate unnecessary or introductory phrases like “all things considered” or “as a matter of fact” etc.
 - Avoid unnecessary adjectives (e.g., *very* poor, *really* desperate, etc.)
- Use an active voice and action verbs.
- When quoting numerical statistics, say “1 in 10” instead of “10%”.
- Ways to improve your writing:
 - Read existing op-eds and Letters to the Editor. See what gets published. Note impactful tones or approaches.
 - Take ego out of the equation – this is not about you; it's about getting attention for the issues.
 - Get a fresh pair of eyes to proofread your piece before it is submitted.
 - Check out grammar.ccc.commnet.edu/grammar/concise.htm for more editing tips.
- Prepare and include a very brief bio, along with your contact info at the bottom.

LETTERS TO THE EDITOR TIPS

- Early in your letter, mention the article, editorial or letter to which you are responding or tie your letter to a recent event or issue in the news.
- Lead with a clear and concise opinion, ideally in the first sentence.
- Choose your words carefully as you will likely have 250 words or less.

OP-ED TIPS

- Recommended structure:
 - Open with a clear and concise opinion statement.
 - Support your opinion with evidence-based, factual information. Be careful not to overwhelm the reader with statistics.
 - Restate your opinion at the end.
- Try to present a positive point of view and offer solutions.
- Try not to overly demonize individuals, institutions or industries.
- Consider your audience. It might be better to sway uncommitted opinions and not preach to the choir or rail against opponents.

Active Recreation Checklist

Check the strategies found at or near this site. Take photos of good examples!

- Well-designed stairs—(lighting, art, music, etc.)
- Stair prompt signage
- Art in schoolyard or surrounding area
- Fitness space for high school students/adults
- Multi-use spaces for classes and community
- Adequate indoor recreation spaces
- Adequate outdoor recreation spaces
- Playgrounds accommodating a wide range of interests, ages and abilities
- Playstreets
- Colorful ground markings (hopscotch, running track, etc.)
- Other.....
- Other.....
- Other.....

What active design improvements can be made? For each idea, answer the following questions. Be sure to take a picture of sites that we can work on improving!

Proposed active design improvement	How would your proposed improvement increase access to <i>active living</i> or <i>healthy eating</i>?	Who would benefit from this improvement? (students, teachers, staff, community members, etc.)

Healthy Foods and Beverages Checklist

Check the strategies found at or near this site. Take photos of good examples!

- Water fountains – indoors and outside
 - Farmers markets/youth markets
 - Inviting cafeteria design
 - Grocery stores with fresh produce
 - Garden to Café (or similar farm to table cafeteria program)
 - Other.....
 - Other.....
 - Other.....
- Water jets
 - Alternative Lunch Menu
 - Healthier choices at restaurants and cafés
 - Healthy food trucks
 - Green carts
 - Functioning and clean water fountains

What active design improvements can be made? For each idea, answer the following questions. Be sure to take a picture of sites that we can work on improving!

Proposed active design improvement	How would your proposed improvement increase access to <i>active living</i> or <i>healthy eating</i> ?	Who would benefit from this improvement? (students, teachers, staff, community members, etc.)

Green Spaces and Nature Checklist

Check the strategies found at or near this site. Take photos of good examples!

- Parks
- Plazas
- Indoor plants
- Outdoor plants
- Greenhouses
- Rooftop gardens
- School gardens
- Trees and natural elements
- Planters

Other.....

Other.....

Other.....

What active design improvements can be made? For each idea, answer the following questions. Be sure to take a picture of sites that we can work on improving!

Proposed active design improvement	How would your proposed improvement increase access to <i>active living</i> or <i>healthy eating</i> ?	Who would benefit from this improvement? (students, teachers, staff, community members, etc.)

Getting To and From School Checklist

Check the strategies found at or near this site. Take photos of good examples!

- Bike lanes
- Bike parking
- Benches
- Safe intersections
- Landscaped medians
- Transit access
- Traffic calming elements
- Attractive sidewalks (street trees, benches, art, etc.)
- Street trees and planters
- Lighting
- Murals and public art
- Pedestrian plazas
- Outdoor cafés
- Indoor bike storage
- Outdoor bike parking

Other.....

Other.....

Other.....

What active design improvements can be made? For each idea, answer the following questions. Be sure to take a picture of sites that we can work on improving!

Proposed active design improvement	How would your proposed improvement increase access to <i>active living</i> or <i>healthy eating</i> ?	Who would benefit from this improvement? (students, teachers, staff, community members, etc.)

ACKNOWLEDGMENTS

The development of the Active Design Toolkit for Schools resulted from the vision of the Partnership for a Healthier Manhattan, a coalition of the Icahn School of Medicine at Mount Sinai’s Center for Health Equity and Community-Engaged Research. They collaborated with the Partnership for a Healthier Bronx at Bronx Health REACH and the Partnership for a Healthier New York City to lead a multi-sector, city-wide team, to showcase the creative ways to foster physical activity in NYC schools. They would like to thank the following for their dedication, review and input in the creation and execution of this project.

At the time of this publication’s development, individuals listed below worked in the following capacities.



DEVELOPMENT & CORE TEAM

Icahn School of Medicine at Mount Sinai

Devin Madden, MPH
Program Manager, The Partnership for a Healthier Manhattan

Lisa Herron
Project Coordinator, The Partnership for a Healthier Manhattan

Lauren Loor, MPH
Project Assistant, The Partnership for a Healthier Manhattan

Bronx Health REACH/Institute for a Family Health

Emma Rodgers, MPH
Senior Program Manager, The Partnership for a Healthier Bronx

The New York Academy of Medicine

Shara Siegel, MSPPM
Policy Associate

New York City Department of Health and Mental Hygiene

Sarah Wolf, MPH, RD
Active Design Manager, Healthy Eating Active Living Program

Kristina Capron, MA
Active Design Coordinator,
Healthy Eating Active Living Program

Monica Ortiz Rossi, MFA
Active Design Coordinator,
Healthy Eating Active Living Program

Community Education Council 1

Lisa Donlan, MBA, MA
President

The Partnership for a Healthier New York City

Earl Brown, MPA
Executive Director

Takeesha White, LMSW
Community Engagement Director

KEY CONTRIBUTORS

Asphalt Green

Arlen Zamula, MPH
Associate Director, Recess Enhancement Program

New York City Department of Health and Mental Hygiene

Audrey Castillo, MPH
School Wellness Program Coordinator, Brooklyn District Public Health Office

Rebecca Lee, MPH
Physical Activity & Nutrition Coordinator, East and Central Harlem District Public Health Office

Maggie Veatch, MPH
Director, Nutrition and Physical Activity, Brooklyn District Public Health Office

New York City Department of Transportation

Jeffrey Malamy
Chief of Staff, Office of Bicycle and Pedestrian Programs

Place It!

James Rojas, MS, MA
Founder and Director of Place It!

EXTENDED TEAM

Bedford Stuyvesant Restoration Corporation

Verna DuBerry Ademu-John, MS
Program Manager, The Partnership for a Healthier Brooklyn

Robert Henry Jones
Program Associate, The Partnership for a Healthier Brooklyn

Bronx Health REACH/Institute for Family Health

Kelly Moltzen, MPH, RD
Program Coordinator, HEA+LTHY Schools NY

Caroline Dunn
Intern, The Partnership for a Healthier Bronx

Make the Road New York

Dahlia Goldenberg
Project Coordinator, The Partnership for a Healthier Queens

New York City Charter School Center

David Frank
Director, School Supports

Hannah Shirey
Program Manager, School Supports

New York City Department of Education

Alice Goodman
Deputy Executive Director, Office of School Wellness Programs

Lindsey Harr
Executive Director, Office of School Wellness Programs

New York City Department of Health and Mental Hygiene

Carmen Diaz-Malvido, MS
Community Engagement Director, East and Central Harlem District Public Health Office

NYC Department of Transportation

Michelle Kaucic
Director, Strategic Communications

Kim Wiley-Schwartz
Assistant Commissioner, Safety Education and Outreach

Lucy Small
Admissions Coordinator, City-As-School

Icahn School of Medicine at Mount Sinai

Wendy Huang
Intern, The Partnership for a Healthier Manhattan

The Partnership for a Healthier New York City

Jennifer Richey
Communications Director

The Renaissance Charter High School for Innovation

Pablo Torres
Community Engagement Director

Staten Island Partnership for Community Wellness

Jody Stoll
Program Manager, The Partnership for a Healthier Staten Island

REVIEW & INPUT**Center for Active Design**

Suzanne Nienaber, MUP
Director, Programs and Partnerships

New York City Department of Health and Mental Hygiene

Karen K. Lee, MD, MHSc, FRCPC
Senior Advisor, Healthy Eating Active Living Program

Lauren Lindstrom, MPH
Special Projects Manager, Healthy Eating Active Living Program

Kimberley Rasch, MS, MPH
Partnerships to Improve Community Health Project Director, Chronic Disease Prevention and Tobacco Control

New York City Department of Education

Sharon Jaye, MS, PhD
Director of Sustainability

New York City Department of Sanitation

Marisa Adler, MS
Waste Prevention, Reuse and Recycling Analyst

Transportation Alternatives

Jennifer So Godzeno, MSUP, MPH
Planning Director

DESIGN**Roslyn Hyde Design****Vanguard Direct**



REFERENCES

- 1 New York City Department of Health and Mental Hygiene. Egger JR, Konty KJ, Bartley KF, Benson L, Bellino D, Kerker B. Childhood Obesity is a Serious Concern in New York City: Higher Levels of Fitness Associated with Better Academic Performance. NYC Vital Signs 2009; 8(1): 1-4; <http://www.nyc.gov/html/doh/downloads/pdf/survey/survey-2009fitnessgram.pdf>
- 2 New York City Department of Health and Mental Hygiene. Youth Risk Behavior Survey: Physically active 60 minutes per day. 2011; https://a816-healthpsi.nyc.gov/SASStoredProcess/guest?_PROGRAM=%2FEpiQuery%2Fyrbs%2Fyrbs&strat1=none&strat2=none&qtype=univar&year=2011&var=pa7day2
- 3 New York City Department of Health and Mental Hygiene. Youth Risk Behavior Survey: Daily PE Class. 2011; https://a816-healthpsi.nyc.gov/SASStoredProcess/guest?_PROGRAM=%2FEpiQuery%2Fyrbs%2Fyrbs&strat1=none&strat2=none&qtype=univar&year=2011&var=peclas2
- 4 U.S. Department of Health and Human Services. 2008 Physical Activity Guidelines for Americans. 2008; <http://www.health.gov/paguidelines/pdf/paguide.pdf>
- 5 Centers for Disease Control and Prevention. The association between school based physical activity, including physical education, and academic performance. Atlanta, GA: U.S. Department of Health and Human Services; 2010.
- 6 Spengler J.O. Promoting Physical Activity through the Shared Use of School and Community Recreational Resources. Active Living Research, a National Program of the Robert Wood Johnson Foundation. A Research Brief. April 2012; http://activelivingresearch.org/sites/default/files/ALR_Brief_SharedUse_April2012.pdf
- 7 Castelli, DM, et al. Active Education: Growing Evidence on Physical Activity and Academic Performance. San Diego, CA: Active Living Research; 2014; <http://www.activelivingresearch.org>
- 8 Ginsburg, K.R. The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds. American Academy of Pediatrics. 2007; <http://www2.aap.org/pressroom/playFINAL.pdf>
- 9 Institute of Medicine of the National Academies. Educating the Student Body: Taking Physical Activity and Physical Education to School. 2013; <http://www.iom.edu/Reports/2013/Educating-the-Student-Body-Taking-Physical-Activity-and-Physical-Education-to-School/Report-Brief052313.aspx>
- 10 Robert Wood Johnson Foundation. Can a Game of Tag Help Combat Bullying?. 2012; <http://www.rwjf.org/en/about-rwjf/newsroom/newsroom-content/2012/04/can-a-game-of-tag-help-combat-bullying.html>
- 11 Stratton G. Promoting children's physical activity in primary school: an intervention study using playground markings. Ergonomics. 2000; 43 (10): 1538-46
- 12 Centers for Disease Control and Prevention. Fostering School Connectedness, 2009; United Nations, Human Rights. Fact sheet No.10 (Rev. 1), The Rights of a Child. 1993; <http://www.ohchr.org/Documents/Publications/FactSheet10rev.1en.pdf>
- 13 Cardon G, De Clercq D, De Bourdeaudhuij I, Breithecker D. Sitting habits in elementary schoolchildren: A traditional versus a "moving school". Patient Educ Couns. 2004 08;54(2):133-42.
- 14 Lanningham-Foster L, Foster RC, McCrady SK, Manohar CU, Jensen TB, Mitre NG, et al. Changing the school environment to increase physical activity in children. Obesity (Silver Spring). 2008 08; 16(8):1849-53.
- 15 Benden ME, Wendel ML, Jeffrey CE, Zhao H, Morales ML. Within-subjects analysis of the effects of a stand-biased classroom intervention on energy expenditure. Journal of Exercise Physiology. 2012; 15(2):9-19.
- 16 Benden ME, Blake JJ, Wendel ML, Huber Jr. JC. The impact of stand-biased desks in classrooms on calorie expenditure in children. American Journal Public Health. 2011 08; 101(8):1433-6.
- 17 Blake JJ, Benden ME, Wendel ML. Using stand/sit workstations in classrooms: Lessons learned from a pilot study in Texas. Journal of Public Health Management and Practice. 2012; 18(5):412-5.
- 18 United Nations, Human Rights. Fact sheet No.10 (Rev. 1), The Rights of a Child. 1993; <http://www.ohchr.org/Documents/Publications/FactSheet10rev.1en.pdf>
- 19 Edmonds CJ, Burford D. Should children drink more water?: The effects of drinking water on cognition in children. Appetite. 2009; 52(3): 776-9
- 20 Aidan A. Cognitive performance and dehydration. Journal of the American College of Nutrition. 2012; 31(2): 71-8
- 21 Children's Food Trust. How better food at school improves children's behaviour and attainment. 2014; <http://www.childrensfoodtrust.org.uk/research/behaviourandattainment>
- 22 Taras HL. Nutrition and student performance at school. Journal of School Health 2005;75:199-213.
- 23 Rampersaud GC, Pereira MA, Girard BL, Adams J, Metz JD. Breakfast habits, nutritional status, body weight, and academic performance in children and adolescents. Journal of the American Dietetic Association 2005;105:743-760

- 24 Hoyland A, Dye L, Lawton CL. A systematic review of the effect of breakfast on the cognitive performance of children and adolescents. *Nutrition Research Reviews* 2009; 22:220–243
- 25 Terry Mc-Elrath YM, O'Malley PM, Johnston LD. Accessibility over availability: Food environment and student fruit and green vegetable consumption. *Childhood Obesity*. 2014; 10(3): 241-250
- 26 Centers for Disease Control and Prevention. Strategies for Improving Access to Drinking Water in Schools. 2014; http://www.cdc.gov/healthyyouth/npao/pdf/LWP_WaterAccess_Brief.pdf
- 27 Huang TT, Sorensen D, Davis S, Frerichs L, Brittin J, Celentano J, et al. Healthy Eating Design Guidelines for School Architecture. *Preventing Chronic Disease*. 2013; 10:120084. DOI: <http://dx.doi.org/10.5888/pcd10.120084>
- 28 Krølner R, Rasmussen M, Brug J, Klepp KI, Wind M, Due P. Determinants of fruit and vegetable consumption among children and adolescents: a review of the literature. Part II: qualitative studies. *Int J Behav Nutr Phys Act*. 2011;8:112.
- 29 Blair, D. The Child in the Garden: an evaluation review of the benefits of school gardening. *Journal of Environmental Education*. 2009; 40(8)
- 30 Wells, N., M., At home with nature: effects of "greenness" on children's cognitive functioning, *Environment and Behaviour*. 2000; 32 (6), 775–795
- 31 Taylor, A. F., F.E. Kuo, and W.C. Sullivan. Coping with ADD: The Surprising Connection to Green Play Setting. *Environment and Behavior* 33, 1: 54-77
- 32 Rose, K. A., Morgan, I. G., Ip, J., Kifley, A., Huynh, S., Smith, W., et al. Outdoor activity reduces the prevalence of myopia in children. *Ophthalmology*. 2008; 115(8), 1279-1285.
- 33 The Conservation Volunteers. School Green Gym, Evaluation findings: health and social outcome 2009, 2009; <http://www.tcv.org.uk/sites/default/files/school-green-gym-evaluation-findings.pdf>
- 34 Litt JS, Soobader MJ, Turbin MS, Hale JW, Buchenau M, Marshall JA. The influence of social involvement, neighborhood aesthetics, and community garden participation on fruit and vegetable consumption. *American Journal of Public Health*. 2011;101(8):1466-73.
- 35 National Center for Safe Routes to School. Safe Routes: Trends in walking and bicycling to school: takeaways for building successful programs. 2012; http://www.saferoutesinfo.org/sites/default/files/Trends_in%20Walking_and_Bicycling_to_School-Takeaways_for_Building_Successful_Programs.pdf
- 36 Green RS, Smorodinsky S, Kim JJ, McLaughlin R, Ostro B. Proximity of California public schools to busy roads. *Environmental Health Perspectives*. 2004; 112(1): 61-66.
- 37 Centers of Disease Control and Prevention. Morbidity and Mortality Weekly Report. 2005; 54(38): 949-950. <http://www.cdc.gov/mmwr//PDF/wk/mm5438.pdf>
- 38 Zhu X, Lee C. Walkability and safety around elementary schools: economic and ethnic disparities. *American Journal of Preventative Medicine*. 2008; 34(4):282-290.
- 39 New York City Department of Transportation Safety Education and Outreach. Why Traffic Safety Training?. 2013; http://safestreetsfund.org/wp-content/uploads/2011/10/Vehicle-Pedestrian_Crashes_Ages_5-14.pdf
- 40 New York City Department of Health and Mental Hygiene. Understanding Child Injury Deaths from the New York City Child Fatality Review Advisory Team. 2013; <http://www.nyc.gov/html/doh/downloads/pdf/ip/ip-nyc-inj-child-fatality-report13.pdf>
- 41 Drake KM, Beach ML, Longacre MR, et al. Influence of sports, physical education, and active commuting to school on adolescent weight status. *Pediatrics*. 2012; 130(2): e296-304.
- 42 Cooper, A.R., Anderson, L.B., Wedderkopp, N., Page, A.S., Froberg, K. Physical activity levels of children who walk, cycle, or are driven to school. *American Journal of Preventive Medicine*, 2005; 29(3): 179-184.
- 43 IWALK. Research into Walk to School Promotions. 2005; http://www.iwalktoschool.org/downloads/Report_IWALK_Promotions.pdf
- 44 Attendance Works. Springfield: Walking School Bus. 2010; <http://www.attendanceworks.org/what-works/springfield-walking-school-bus/>
- 45 Sustainable Streets:2013 and Beyond. 2013 New York City Department of Transportation; <http://www.nyc.gov/html/dot/downloads/pdf/2013-dot-sustainable-streets-lowres.pdf>
- 46 Burden, D. Urban Street Trees 22 Benefits Specific Applications. 2006; http://www.michigan.gov/documents/dnr/22_benefits_208084_7.pdf



Camp Bike New York gets ready to roll
at Brooklyn Bridge Park
Credit: Ryan Trupp

