DANISH KURANI STUDIO

December 2014

Design process and concept for the new EPIC High Schools founded by NYC Expanded Success Initiative

EPIC HIGH SCHOOLS NEW YORK CITY

5

Approach
Avoid that cookie cutter and use this design process to create an exceptional place of learning.

38

Experiments
Our students and teachers test different classroom environments to help refine designs.

62

Learners
Two students take the EPIC campus for a whirl and show us why it makes such a big difference.

DANISH KURANI STUDIO

We're your personal design consultants — committed to inspiring places.

We design physical environments that enable learning and innovation to take place, everywhere from inside the classroom to out in the neighborhood. Our process is human-centered, connection-seeking, and interactive. We believe that by uncovering who we are as organizations, communities, and learners, we can shape who we want to become. We work with you to co-create a holistic vision and design for your learning ecology — including spaces, mindsets, and operations strategies.

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Cover image
EPIC students head to the Pit to discuss their latest project on grassroots governance.

1
Introduction

Why were EPIC schools launched in New York City?

Because only 10% of black boys graduating in NYC were college ready ...this had to change

and why is the design of these high schools so important?

a well-designed environment will mobilize teachers, support curriculum, and empower students

how do you create a campus that makes sense for EPIC?

design physical environments around 4 things

basic needs, the school model, end users, and context

Critical Response

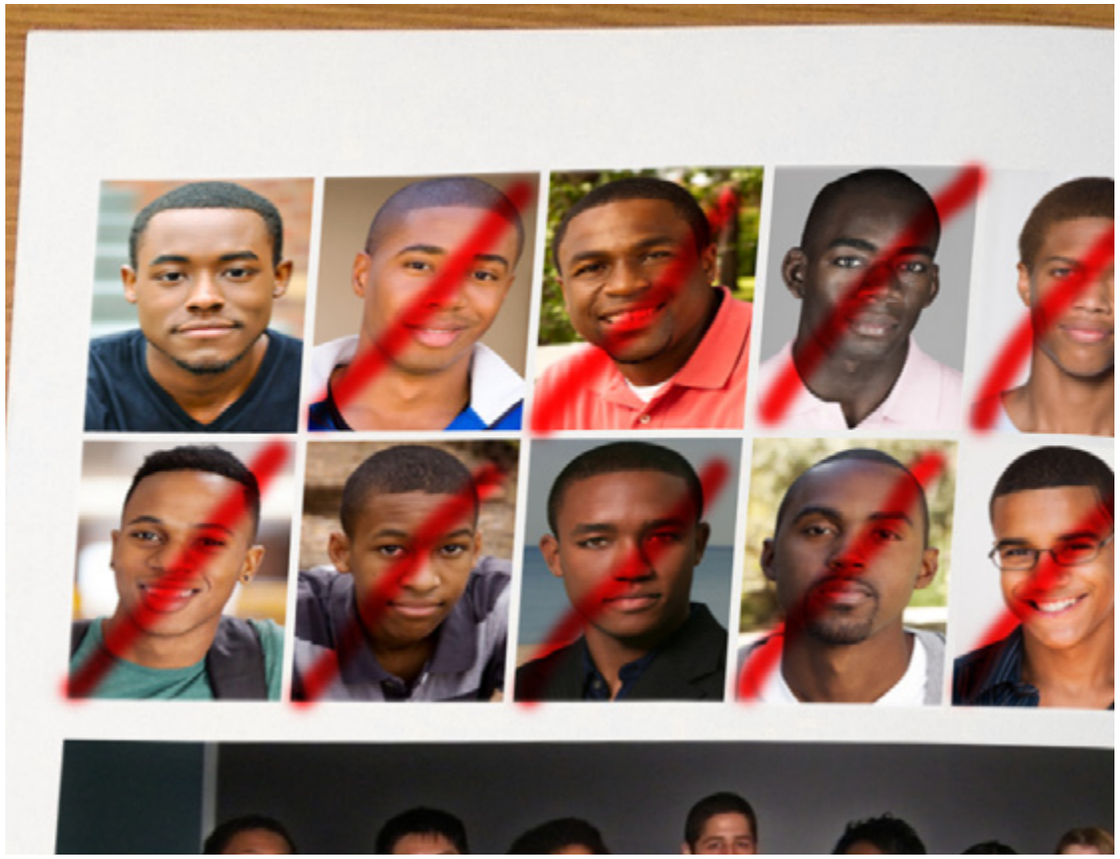
Recognizing that the current system was struggling to educate African American boys, NYC has committed to redesigning the high school experience, everything from the curriculum to campus.

As of 2011, only 1-in-10 black males graduating from a New York City public high school were prepared for college. In light of this, NYC launched the Young Men's Initiative (YMI) to improve the education, employment, justice, and health outcomes of black and Latino young men. The Expanded Success Initiative (ESI), an extension of YMI, focuses on increasing students' college and career preparedness. With support from the Open Society Foundation, ESI has created the innovative EPIC High School model that holistically prepares all students for college, career, and life success. The new schools emphasize three key areas of work: practice, people and place.

EPIC High Schools incorporate a combination of practices, structures, and resources to ensure that students graduate with a positive sense of self, "I can…" mentality, and capacity to transform the world around them. The school provides a rigorous, culturally relevant, academic program that prepares students for the demands of college and careers. A personalized approach to instruction challenges students to dream big and design their futures. It engages students in solving real-world problems and supports their individual progress and growth. Students graduate confident in their ability to transform the world around them.

The mission of EPIC Schools is to challenge all students to dream big and support them in designing their future. The school leadership recognizes that each student is an individual, and therefore provide a series of learning experiences that equip young people to walk their unique paths. The cultures of student and local communities are honored and integrated to make learning relevant, responsive, and accessible. EPIC aims to develop citizens with a positive sense of self, ready to stand for social justice.

The vision behind the new initiative is for all graduates of EPIC Schools to be college and career ready and provided with a



meaningful pathway to lifelong learning. By fostering the boldness to dream and by developing a commitment to inner growth and outward transformation, graduates will be ready to design their own futures.

Program highlights for the schools includes culturally relevant practices, blended instruction with both teacher-led classes and use of digital resources, real-world problem-based learning, student choice on elective courses, CORE advisory program focused on personal and social development, mentoring, rites of passage experiences, college and career counseling starting in 9th grade, internships, college-level courses in upper grades, community service opportunities.

While this ESI initiative shows great promise, a number of key factors will determine the success of the schools, its teachers, and students. One of these factors is the environment that they will all occupy. To understand why the design of school campuses is important, let's turn to Tom Vander Ark, former Director of Education at the Bill & Melinda Gates Foundation. As early as 2007, he was urging educational leaders to consider the importance of physical environments in American high schools.

Tom noted, "The current failure of our nation's high schools rests upon a complex mixture of social, economic, political, and environmental factors. While this complexity can be daunting, researchers and practitioners agree that achievement increases when students are challenged, presented with authentic curriculum, and supported by both peers and adults in their learning environments... It only makes sense that [our] burgeoning high school reform movement be accompanied by smart design for educational facilities.

Research confirms that school facilities impact student learning. As school districts nationwide are projected to spend hundreds of billions of dollars on K-12 construction in the next decade, leaders have an unparalleled opportunity to use the facilities planning process to leverage educational reform. If we are truly committed to success for all learners, we must incorporate well-designed facilities into our reform agenda.

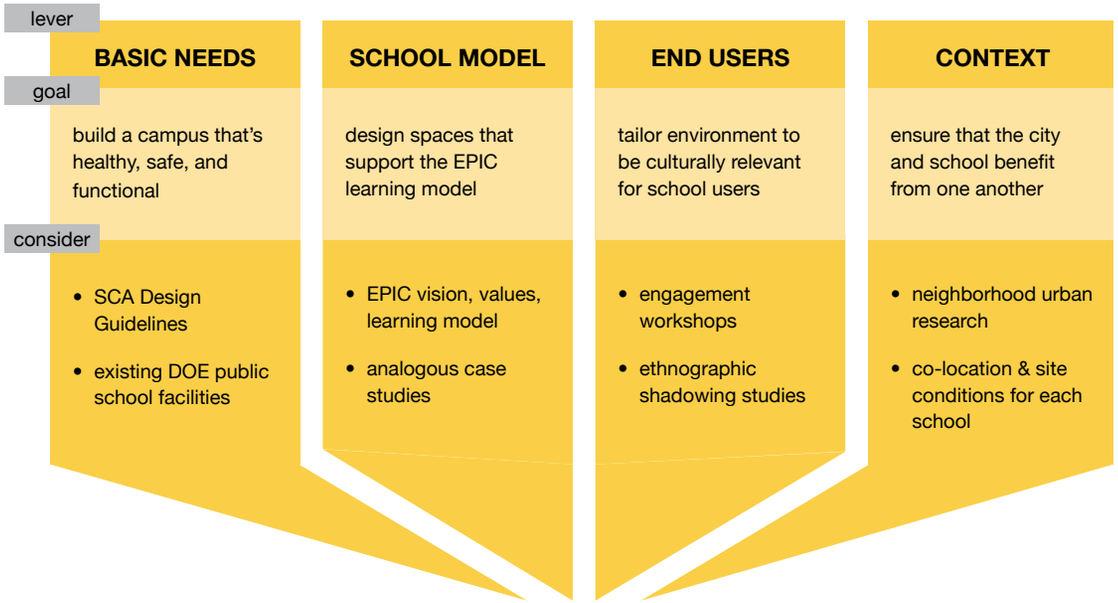
Such opportunities are all too often squandered. Many new high schools continue to be built using the traditional blueprint... Nostalgic gravity — which pulls people back to what they know and have themselves experienced — and insufficient knowledge both stifle innovation... Most disturbing, these buildings often hinder the very rigorous, relevant, and relationship-based teaching and learning that their inhabitants have come to embrace as crucial for student achievement.

After decades of building institutional schools that often look and feel more like correctional facilities than places where amazing teaching and learning occurs each day, isn't it high time that we do better? Shouldn't our schools — like our homes, our cultural institutions, and our public spaces — reflect the principles we hold most dear? I look forward to a day when all students have the opportunity to learn in places worthy of their potential."

Below
The traditional American classroom reinforces a static, teacher centric learning experience.

Design Approach

Far too many school districts rely on a flawed approach for creating learning facilities. Our breakthrough design process leads to campus environments that support and propel staff, students, and community.



Historically, the design of US public schools has suffered from three fundamental miscues: 1) we have allowed budgets, not education, to shape our school buildings, 2) we have clung too tightly to conventional notions of what constitutes a school, and 3) we have failed to include teachers, students, and community in the design of their own schools. Further, many of the architecture firms that construct our schools are experts in project management and delivery, not education design. Though these firms deliver structurally sound and economical buildings, do we trust their expertise on learning spaces? Their architects rush into a lengthy drafting phase without adequate understanding of the school's needs, pedagogy, or context. These delivery architects frequently provide one-size-fits-all solutions or timid derivations of existing school houses. The result? Districts are spending dollars on shiny new boxes that are not fundamentally different than existing, obsolete facilities.

Our breakthrough design approach fixes this problem and allows us to build truly exceptional places of learning. First, our design process temporarily suspends constraints of budget and resources and focuses on the four levers that actually make an exceptional place of learning — Basic Needs, School Model, End Users, and Context. In our experience, exceptional campuses are safe and functional, are supporting the learning, are culturally appropriate, and enable the school and city to benefit from one another. Second, one of our core missions at DKS is to rethink the relationship between *learning* and *space*. While we are grounded in the knowledge of school designs worldwide and across many eras, our goal is not to tinker or incrementally improve upon the typology of the school house and campus. Each school we partner with is an opportunity to experiment, to ask "What If?" and stretch the limits of everyone's imagination. Third, we believe it's the teachers, students, and community that drive the success and sustainability of a school. Because of this, we go to great lengths to engage these end users in the design of the spaces they will use and rely on. When these end users have a say in design, the resulting place is far more in-tune with their needs, they are able to make the best use of the space, and they feel a greater sense of ownership and pride.

The next four chapters illustrate this journey. DKS has worked with EPIC Schools to design for the four critical levers. We have considered everything from the new competency based curriculum to the daily lives and needs of students and teachers. Our participatory process has led to bountiful insights and self-discovery, unanticipated notions of what the community wants, and a concept design capable of supporting and propelling EPIC High Schools.

2
Basic Needs

What are the basic reqs for a successful learning environment?

Safe/comfortable conditions, diversity of settings, and positive perception towards the place

does School Construction Authority ensure basic needs are met?

sort of... SCA design guidelines focus on Conditions, but overlook Diversity and Perception (and school model, users, context)

how should EPIC schools design for basic needs?

when given a DOE facility, update physical infrastructure

and get creative w/ a co-location strategy and generic 28x28' rooms

Co-location sounds important. What are the challenges?

let's look at another NYC school, Mott Hall Bronx HS

Building the Foundation

Students and teachers need their campus to be a safe, healthy, and functional environment. Beyond well-maintained buildings they also need diverse spaces to support a range of activities and learning experiences and a school environment that makes them feel valued, included, and excited to learn.

Unless the environments serving EPIC students and teachers are safe, clean, and functional, learning and teaching will undoubtedly suffer. The impact of the built environment on learning progression and teaching efficacy highlights the importance of this aspect for designers and policy makers. The Organisation for Economic Co-operation and Development (OECD) argues that governments have a responsibility to invest in quality educational spaces because of the important role that quality spaces play in increasing access and equity for all in education, improving educational effectiveness, and promoting the acquisition of key competencies. While the United States may be further along than many countries in teaching practices and pedagogical development, the provision of adequate facilities is still a pressing challenge. An estimated 25,000 schools throughout America need major repair or outright replacement, and 60 percent of all schools report at least one major building feature

What are the basic considerations for creating an effective physical learning environment?	CONDITIONS
	noise & acoustics lighting thermal comfort furniture materials
DIVERSITY	**PERCEPTION**
color transparency privacy play spaces nature	safety school size building age aesthetics ownership

that needs replacement or extensive repairs. Nearly half of all schools lack the basic electrical wiring to support computers, modems, and other modern communication technology.

When addressing basic needs for delivering a quality high school experience, the design team of architects and stakeholders must consider three aspects of the environment: Conditions, Diversity, and Perception.

Conditions. One of the most basic necessities that all students and teachers have is being in a school that is comfortable, safe, and functioning. Considerable evidence correlates poor physical conditions with negative impact on students and teachers. These conditions include noise, temperature, air quality, and lighting, to name a few. While the effects may vary from student to student – for example, studies indicate that noise interferes more with female learners than male learners – one thing is clear, the quality of space influences educational outcomes.

In fact, in 2009, the 21st Century School Fund published research providing substantial evidence relating the quality of space to student outcomes. There is clear evidence that extremes of environmental conditions (for example, poor ventilation or excessive noise) have unfavorable effects on students and teachers and that improving these conditions has significant benefits. However, once minimum standards are attained, evidence of the effect of changing basic physical variables is less significant.

For nearly 93,000 aging public schools in the United States, meeting the basic standards of physical condition is still a pertinent concern. In the planning process for new buildings or for retrofits, the design team should always consider any cultural or geographic preferences that vary from the documented standards for environmental conditions. By providing adequate physical facilities, schools can increase comfort, well-being, and attitude, and contribute to improved achievement.

Let's examine something as seemingly simple as furniture. Furnishings play a subtle, yet important role in the success of a school. Selection of furnishings should consider all users of the institution, particularly the students and teachers who inhabit the space for nearly 8 to 10 hours each day. Furniture has effects on the physical development and attention span of children, while also influencing teaching practices through space layouts and storage capacities. Most of the furniture in today's public schools was procured under an economical, one-size-fits-all mentality. Studies show that children need to move in order to develop. A rigid sitting posture is manageable for a limited time. However, maintaining a static posture for an extended period can lead to mental and physical impairment due to poor oxygen supply, causing what has been referred to as 'the school headache'.

Diversity. Research has shown that not all students learn the same way. Creating a diversity of space types on a school campus is as much about providing access to education as it is about creating interest and supporting functions. By now we understand that not all children are alike. Different children have different preferences and learning styles, and respond to environments differently. Just as good teachers scaffold their lesson plans to engage multiple intelligences, school environments should also account for this range of learners. An environment that is rich in sensory experiences will engage a higher percentage of students, appealing to their individual learning styles and granting them access to education. Not only does a sensory-rich environment reach a broader spectrum of individuals, it also helps them retain and retrieve what they learn. Carefully curated environments can stimulate or subdue senses, aid in creativity, cause fear or joy, and lead people through the full breadth of human experience.

Perception. Buildings and spaces convey messages reflecting the inner life, activities, and social values of the users. Characteristics like shape, color, or arrangement help building users make vividly identified mental images of the environment. People read these messages, make judgments, and act accordingly. Thus, specific environments can be evaluated according to the different interpretations of the messages conveyed. Poor conditions due to building age and aesthetics send messages to youth that they are not a priority. Studies show aesthetic appearance can offer subtle messages to staff and students around the transmission of cultural values as well as stimulate or subdue, aid in creativity, slow mental perception, and cause fear and joy.

In many districts, growing enrollment, coupled with limited capital and operating resources, has led to consolidation of schools and schools with larger enrollments. Large school size or excessive density can lead to increased aggression and feelings of isolation. Students need a degree of privacy and ownership to feel a sense of belonging.

The school environment affects teachers' and students' health, work, leisure, emotions, and sense of place and belonging. When the school environment works well, their lives and educational performance are enhanced. Since the school environment is intended to support students' individual needs, it is necessary to gain knowledge about their diverse needs and how the physical environment satisfies them.

Below
Play spaces are vital for learning, memory, and well-being.

Right
Building age and aesthetics reflect school values and priorities.

INSTALLED ITEMS

	SIZE	SPEC SECTION	QTY
	2'8"x2'	06410	2
	2'8"x2'	06410	2
	10'x4'	10100	1
	3'x4'	10100	2
	16'x8"	10100	1
	7'0"X4'0"	10100	2
	7'0"x8"	10100	2
	11'x2'9"	10100	1
	11'x30"	06410	1
	24"x12"x24"	06410	5
	–	16770	1
	–	16140	5
	–	16140	2
	–	16770	1
	–	16725	1
	–	16140	2
	–	16130	1
	–	16720	1
	–	16727	1
	–	16727	1
	–	16727	1
	–	16145	1
	–	16130	1
	–	15970	1

ANCE) AND INSTALLED ITEMS

INSTALLED ITEMS

	65"X50"		1
	8"X11"		1
	10"X12"X4"		1

TALLED ITEMS

	SIZE	QTY
	24"x22"x39", 18" S.H.	1
	24"x35"x30", 18" S.H.	30
	25"X6	
	36"x2	
	20"x	
	–	
	–	
	–	

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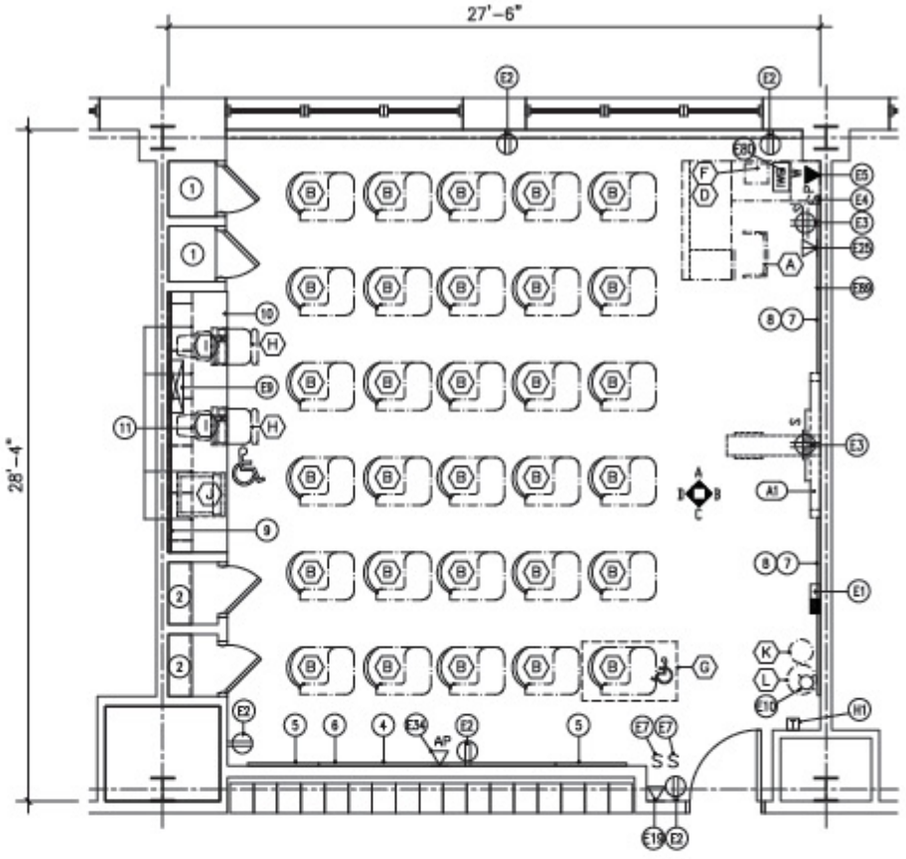
ED AS S

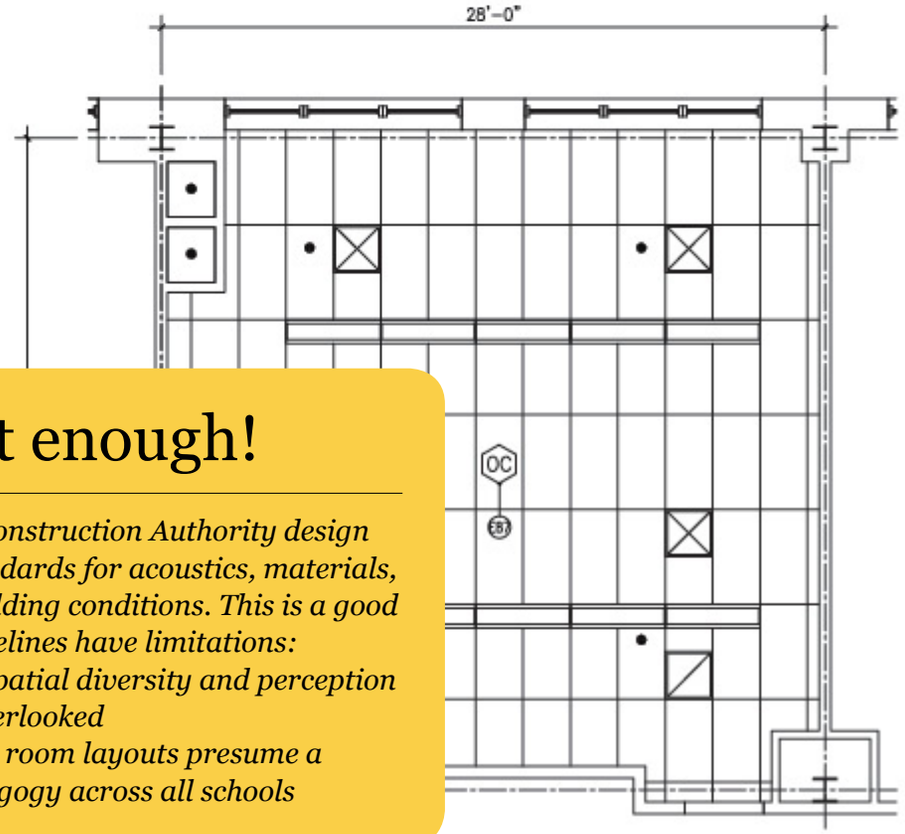
OR AND

A 24" WIDE WORK SURFACE. IF
UBSTITUED, 90% ARE TO BE
ARM UNITS.

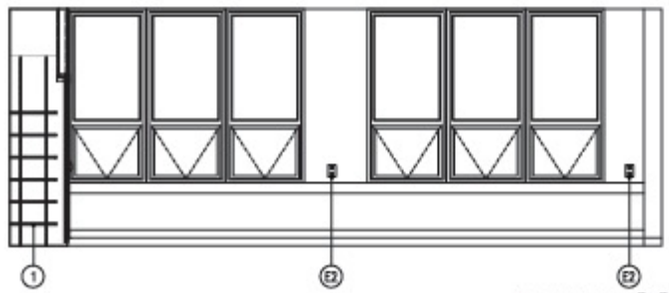
FURNITURE AND EQUIPMENT LIST.



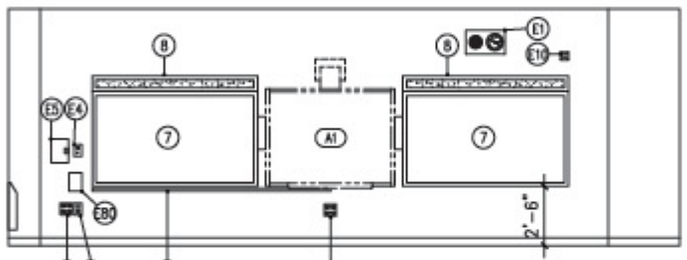
FLOOR PLAN



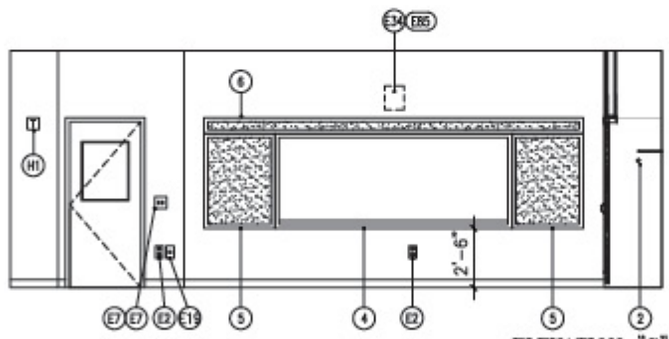
CEILING PLAN



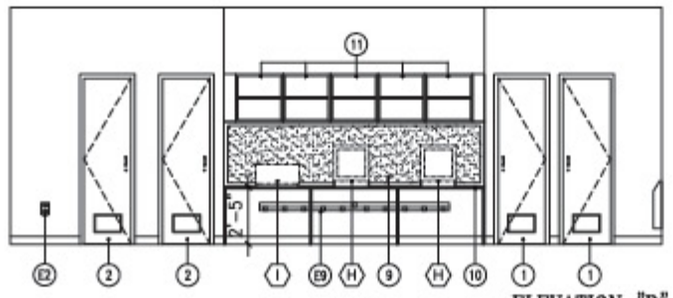
ELEVATION "A"



ELEVATION "B"



ELEVATION "C"



ELEVATION "D"

SCA isn't enough!

The NYC School Construction Authority design guidelines set standards for acoustics, materials, furniture, and building conditions. This is a good start, but the guidelines have limitations:
1) basics such as spatial diversity and perception of facilities are overlooked
2) the prescriptive room layouts presume a homogenous pedagogy across all schools

ROOM PLANNING STANDARDS

SCA
NYC School Construction Authority

No.	Date	Revision
4	3/10/10	VARI
3	11/01/08	VARI
2	7/1/08	VARI
1	2/28/08	VARI

DATE: 11/23
CAD FILE: 1-

TYPICAL CLASSROOM GRADES 9-12

750 SQ. FT.

0 1' 2' 4' 8'

1 20

Upgrading and Updating

To meet basic needs, EPIC Schools will need to modify the existing facilities they are given. This means updating physical and digital infrastructure, breaking the monotony of the typical 28'x28' classrooms, and working with other schools on campus to establish a strategy for sharing the facilities.

Most new EPIC schools will be allotted space in an existing public school facility, likely constructed by the SCA between the 1960-70s. With this comes challenges (and opportunities) for meeting the basic needs for an effective place to learn.

The SCA guidelines provide appropriate direction for upgrading physical conditions such as lighting, air quality, and thermal comfort. Beyond that, focus should be given to conditions of acoustics, furniture, and materials. Classroom noise levels will benefit from upgrades to heating and cooling systems as directed by SCA. However, for superior acoustics, consider swapping the furniture and building surfaces to softer materials that have better sound absorption qualities. Softer materials will also create a more comfortable, less institutional, space for learners. During material selection, ask for products that are made without synthetic compounds and do not pose health hazards. Finally, furniture should be adjustable to accommodate students of different sizes and to encourage movement, not a static posture.

To create the diversity of spaces needed for effective learning, think about use of color, levels of privacy and transparency, and access to nature and play spaces. DOE facilities generally fall under two categories; they have little color and neutral tones or lots of color applied arbitrarily. We know that color has the power to dictate a building's atmosphere and influence the performance of its occupants. Adhere to heuristics for color theory (ex: warm and brightly colored spaces encourage students to read) and use color as a tool to spur desired emotions or behaviors. Modulating privacy and transparency can also have a similar effect. Transparent materials can help make spaces more approachable and encourage participation, allowing less confident students to see before they try. Creating different degrees of transparency can accommodate students who wish to work alone without distractions or incite curiosity in others as they peek in. Thus, strive to create a range of settings, from the intimate and hidden to the congregational and transparent. The traditional design of schools also undervalues the legitimacy of play and isolates inside classroom space and work from outdoor space and play. By nature of co-location, students will likely have less play space than is desirable. Thus, think of classrooms and public spaces as opportunities to introduce unstructured play where students combine learning with physical movement. When creating opportunities for movement and activity, think about incorporating nature as well. Kids, especially the ones growing up in urban contexts full of asphalt and concrete, want spaces where they can play and discover things about the natural world.

Needs around a positive school perception – school size, building age, aesthetics, ownership, safety – are complex and sometimes seem at odds with one another. For example, many schools use fences and surveillance features to keep their campus safe. However, these features can create the perception that the area is unsafe. Trespassing signs and barriers also prevent students or community members from feeling that the school is theirs. Seek to increase safety and feelings of ownership by involving school users in the design process and granting them access to campus after hours. More engagement in school life equals safer schools with more stewards. While co-location means that major overhauls of the campus may not be possible, use renovations and upgrades to improve building age and aesthetics. Students internalize reflections of the buildings on themselves as they identify with their school, its image, and reputation.

Lastly, it is essential to devise a co-location strategy with fellow schools on campus. Plan towards an optimized usage of shared amenities (cafeteria, gymnasium, auditorium) and specialty spaces (science labs). Having a strong sharing plan will enable teachers and students to utilize the building to serve their basic learning needs.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CONDITIONS
as observed on the future NYC public school campuses to be utilized by EPIC High

1 **Noise & Acoustics**
Many NMSSJ classrooms face the Long Island Rail Road track. Every 5-mins the train's loud rumble makes it nearly impossible for students to hear in the classroom.

2 **Lighting**
Existing facilities lack adequate natural light and rely heavily on artificial fluorescent lights that negatively impact occupants.

3 **Thermal Comfort**
Radiators can be loud and ineffective. Occupants have little control of the inside climate, and often barred from opening windows for natural ventilation.

4 **Furniture**
Rigid, uncomfortable, one-size-fits-all furnishings are ubiquitous. These desks proliferate the top-down, expert instruction pedagogy.

5 **Air Quality**
Step outside the primary student entrance of EPIC South and what do you see? Wish we could say this was part of an art installation.

6 **Materials**
Schools built in the 1960-70s were constructed with hard, cheap, and toxic materials. Purchasing economy was allowed to trump occupant comfort, function, flexibility.


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DIVERSITY
as observed at the campuses to be occupied by EPIC High Schools

1 Color
Campuses have dull, uninspiring colors or preference arbitrary 'school colors'. Failure to harness color as trigger for boosting creativity and attention, instilling calm, etc.

2 Privacy
Breakout and contemplation spaces are hard to find. This hallway nook was the only place for solo work.

3 Transparency
Imagine walking through a school with windows into classrooms. You can see the learning happening. Glimpses of wild science experiments and spirited debates get you excited to join.

4 Play Spaces
Most campuses undervalue play and relegate it to a single space, the gymanisum, which is chronically overcrowded.

5 Nature
Although regular contact with nature is important for development, mental and physical health, and happiness, particularly for students from urban areas who have limited opportunities to discover things about the natural world, the future EPIC campuses are currently floating in a sea of concrete and asphalt.


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PERCEPTION
as observed at the campuses to be occupied by EPIC High Schools

1 Safety
Ominous fences, window grills, and metal detectors may protect students and teachers to some degree, but they also signal that the broader community is not welcome on campus.

2 Building Age
Poorly maintained facilities, signal to students that their education and well-being is not important.

3 School Size
Large, monolithic structures are intimidating. Can these large schools be divided into smaller communities?

4 Aesthetics
The existing interiors suffer from one of the following: too cluttered, too barren, or too juvenile and comical.

5 Ownership
Signage and limited after-hours access make it clear that schools belong to the city, not the families that they serve.

Case Study

Mott Hall Bronx HS

Left
The atrium supports daily socializing, breakout groups, and school-wide events.

Right
Students and parents enjoy the school tradition of displaying each child's portrait for all four years.

Challenges of co-location. The 400-student Mott Hall school shares a campus with Validus High, a grade 9-12 prep academy which promotes outdoor activities, and the Applied Math & Science school for academic-inclined 6-12 grade students. Despite their physical connection, there is little collaboration among schools. In fact, students interviewed cited this is a missed opportunity for cross-socializing and expanding course and extracurricular offerings. Other co-location challenges identified by Mott Hall students include: middle school students being intimidated by high school crowd; sharing locker rooms with unfamiliar faces is uncomfortable; the gymnasium is too small once divided into three sections; a shared cafeteria means each school only receives one lunch period which gets extremely crowded, forcing some students to avoid eating altogether. Mott Hall staff have commented on the politics inside the building, noting that relationships with the building manager affects a school's space allotment. Staff also expressed concern over the safety liability when a student from another school enters their part of campus.

Peer Group Connection (PGC). 11th and 12th grade students interview for spots in this popular elective course which offers social-emotional and peer-to-peer development. Daily activities range from planning sessions and debriefs among the 15 PGC students to outreach sessions where each PGC student facilitates for groups of underclassmen. Currently, all PGC activities, both outreach and planning, takes place in traditional classrooms. According to PGC facilitators: "Sometimes re-organizing a classroom takes up a big chunk of the time we have. We need to push most of the furniture to the corners of the room to make space for our circle." When asked what the ideal environment would be for PGC, students remarked: "An Auditorium for outreach and a separate PGC room where we can store supplies and use for team meetings on Monday, Wednesday, and Friday. A space dedicated to us so no other classes are pushing us out of the room towards the end of our sessions. Outreach rooms should have more comfortable seating, bigger classrooms, vibrant colors to keep students awake. Also, if teachers weren't there then kids would open up to us more; maybe teachers can sit in a cubicle in the corner, out of sight."

Mott Halla. This pep rally style event happens once a semester. It involves grade vs. grade competitions (ex: limbo), skits from faculty, and dances from student clubs. The mood is upbeat, celebratory. Awards and superlatives are announced. Mott Halla is made possible by a beautiful open atrium space, which has become the heart of the school.

Community Meeting. This monthly meeting allows grade-level teachers to award prizes and make announcements for their students. Community meetings range from 70-100 people and take place in traditional classrooms that were designed to fit 30. All students are facing the projection screen up front, some sit on tables due to a lack of seating, it's hot and loud, and many become disengaged.

General Environment Design. Students found the school's small population and single-floor layout as a major benefit for socializing and feeling personal. Similarly, they noted positive feelings towards decorating hallways with their artwork and the school tradition of displaying 9th grade portraits for the duration of their time in high school.

3
School Model

What makes EPIC schools different?

personalized + applied learning, cultural relevance, collective work and responsibility

how will the schools help Black and Latino young men?

the focus is on youth development, involving families, and helping students master competencies

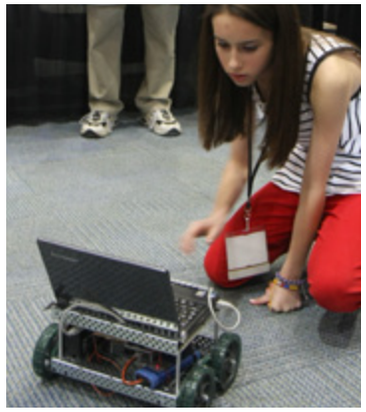
has focusing on these things worked in other places?

Yup, check out NYC i-School and Brotherhood Sister Sol

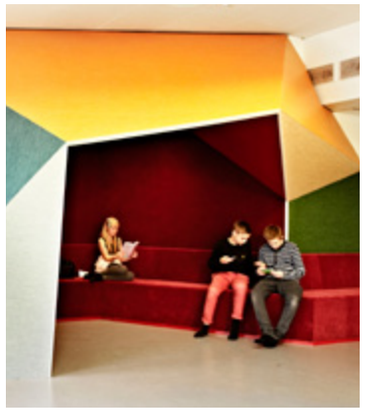
Model

EPIC High Schools are based on six core principles: empowerment, personalized and applied learning, inclusion, cultural relevance, collective work and responsibility, and continuous growth. Altogether, the principles inform the practices of the school, its operation, environment, and culture. The school model centers on three core areas of work: People, Practice, and Place.

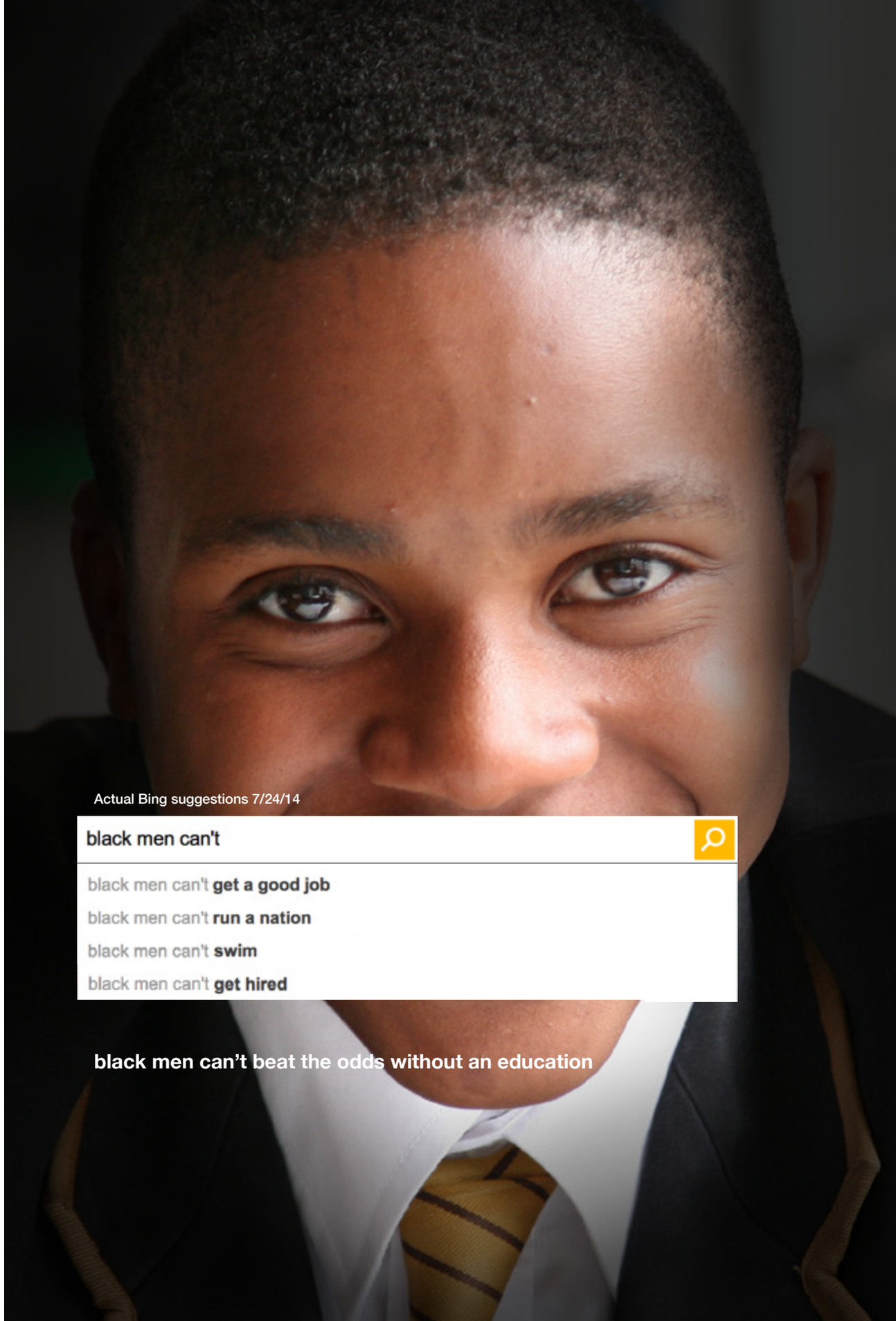
People
Staffing and development based on students' realtime needs. Adult roles and schedules are flexible to accommodate students' varying needs. Staff have personalized professional learning plans to support their continuous growth. Staff selection and professional development is based on adult competencies which support learning priorities and students' needs. A leadership pipeline will be structured to foster professional growth, collaboration, and mentorship. Staff evaluations will be holistic and purposeful and emphasize effective teamwork and individual growth and development.



Practice
Purposeful learning experiences leading to the mastery of skills. Competency-based framework integrating academic, social-emotional, college and career readiness learning goals. Personalized learning pathways that challenge students while providing them with targeted support. Ongoing and varied assessments that afford students multiple and diverse opportunities to achieve and demonstrate mastery. Integrated technology and data use to personalize learning and facilitate access to resources. Early College and Workplace Learning opportunities for students that form a "readiness bridge" into postsecondary opportunities. Youth Development strategies that emphasize restorative practice, cultural relevance and developmental appropriateness.



Place
Environments will nurture growth, community and positive identity. Built environments will be intentionally designed to support transformational learning. Community-based partnerships will connect students to services, supports, and real world learning opportunities. Advocacy and activism that surfaces and addresses constraints that hinder student growth. Families will be engaged to ensure real partnership and shared leadership by the community. Support services and operations systems will remove barriers to learning for students.



Learning Model

How will the new EPIC Schools help Black and Latino young men?

Culturally Responsive Education (CRE). We believe Black and Latino students who come from culturally and linguistically diverse backgrounds can excel if a) their culture, language, heritage, and experiences are valued and used to facilitate their learning and development, and b) they are provided access to high quality teachers, programs and resources. CRE instills caring ethics in the professionals that serve diverse students, uses curricula with ethnic and cultural diversity content, employs communication strategies that build on students' cultures, and nurtures the creation of school cultures that are concerned with deliberate and participatory discourse practices. Moreover, CRE fosters teacher reflection, inquiry, and mutual support around issues of cultural differences. All aspects of the school — operational, professional and instructional — will be designed and implemented through the lens of CRE, including careful hiring, relevant curriculum and pedagogy, reflective staff training and professional development, and supportive school culture and discipline.

Redefined Adult Roles. EPIC will redefine leadership roles to focus on developing culturally competent human capital, including adults with expertise in meeting the needs of Black and Latino youth, English language learners and students with disabilities. Leadership will be distributed across campuses at the most effective levels. For example, there will be an expert teacher embedded at each campus to provide instructional leadership. S/he will coordinate the academic program on the campus, but also support staff in his/her content area across the network. Thus, while affiliated with a particular campus, s/he may spend time at the other campus observing, modeling, providing feedback or conducting trainings. Similarly, the EPIC teaching and instructional delivery model is designed to support the competency-based framework as well as college and career experiences by redefining adult roles in ways that are responsive to personalized student learning. A variety of staff positions will share responsibility for student achievement in both academic and social and emotional learning. Finally, a flexible staffing strategy allows students and staff to benefit from adult expertise across the schools.

Family Support and Advocacy. Evidence clearly indicates the need for more than just rigorous curriculum and instruction to achieve desired results. EPIC will implement a comprehensive support system, including rites of passage, youth development and guidance, that organizes school culture around college and career readiness. Every student will be assigned a youth advocate who will counsel and support them individually and in single-gender groups as well as coordinate wrap-around community services for students and families. In keeping with the tenants of culturally responsive education, EPIC will utilize a Restorative Justice approach to school culture and discipline.

Competency Based Academic Program. Teaching and learning will be wholly organized around helping students to master specific competencies in three domains — Academic Knowledge and Skills, Academic and Personal Behaviors, and College and Career Readiness — that collectively define what a student must know and be able to do in order to be considered college and career ready. The competency framework will be aligned to both the New York State Learning Standards, inclusive of the Common Core State Standards, and the NYCDOE College and Career Readiness Benchmark in order to help students master the skills and knowledge necessary to pass PARCC-aligned Regents exams, graduate from high school, and complete two years of college and/or a career internship of their choice. Four types of courses are offered: Workshops (interdisciplinary, problem-based learning focused on a network-wide theme); Selectives (units of study focused on competency strands and/or clusters); Tutorials (targeted support for mastering discrete skills); and CORE (social-emotional and leadership development).

Systematic Assessment. A competency-based school model requires frequent assessment of discrete skills and knowledge so students always know what they need to learn to get to the next step and achieve their long-term goals. Competencies will be assessed using multiple measures and EPIC will employ authentic assessments that allow students to demonstrate mastery in culturally responsive ways. Units of study will culminate in performance-based assessments and all students will complete an annual Gateway Project.

Students will participate in a sequence of workplace learning experiences implemented through an apprenticeship infrastructure with industry and community partners.

Digital Pathway. Personalized instruction requires ready access to standards and benchmarks, curriculum materials, and instruction and assessment tools that meet the needs of both students and teachers. Based on growing evidence of value and effectiveness, EPIC will utilize a digital pathway that allows students to personalize their learning and share instructional resources across schools. EPIC intends to implement a secure technology platform that integrates competencies, students' individual learning plans, curriculum resources and assessments, and performance data.

Data Driven Design. The EPIC assessment system will be aligned to the competency-based framework to provide frequent and useful feedback to all stakeholders in the school, including students, teachers and parents. The school's data management system will provide a robust and intuitive platform that allows students to document valid and reliable evidence of their competencies, teachers to plan instruction that addresses their remaining needs, and youth advocates to address internal and external obstacles to learning and growth.

Workplace Learning Experiences. Students will participate in a sequence of workplace learning experiences implemented through an apprenticeship infrastructure with industry and community partners. The groundwork for this element will be laid beginning in 9th grade with career awareness and lead to authentic work experiences that go beyond typical high school internships.

Early College Experiences. Beginning in 9th grade, all students will take part in a sequence of early college experiences implemented through college access programs that include family engagement and financial planning. Students' understanding of the intellectual and personal requirements for college success will grow as they prepare to do college level work during their high school career

EPIC Network. Fundamental to the EPIC model is the simultaneous launch of three schools that operate together in a coordinated network to share effective practices and leverage economies of scale. EPIC is envisioned more as a single school with multiple campuses and distributed leadership as opposed to independent schools controlled by a management organization. The efficiencies generated by networking basic operational functions into a single school system for nimble start-up and management will increase resources devoted to student learning and achievement. Moreover, instructional resources, including human capital, will be deployed across the network to greatly expand learning opportunities for students while maintaining the benefits of a small learning community. The three campuses in the EPIC network will be governed by and answer to a single leadership team to ensure collaboration and adherence to the mission and vision.

19 Competencies

Teaching and learning is wholly organized around helping students to master specific competencies in three domains — Academic Knowledge and Skills, Academic and Personal Behaviors and College and Career Readiness — that collectively define what a student must know and be able to do in order to be considered college and career ready.

Four types of courses offered: Workshops (interdisciplinary, problem-based learning focused on a network-wide theme); Selectives (units of study focused on competency strands and/or attainments); Tutorials (targeted support for mastering discrete skills); and CORE (social-emotional and leadership development).

Read Analytically
I can read, decode and interpret text and other media. I can use various strategies to access information from charts, graphs, and diagrams. I can read for meaning and demonstrate understanding through personal response. I can respond to text and media by showing understanding, making connections, and making judgments. I can understand and make meaning from news sources, academic writing, literature and other forms of media to advance my own knowledge, understanding and enjoyment.

Communicate & Be Creative
I can interact with others through verbal, visual and artistic expression. I can use clear, concise, organized language to express thoughts and ideas in front of a group. I can listen effectively and engage others in conversations, in working together and in presenting information and ideas. I can actively respond to participants in a conversation. I can express my thoughts, ideas and emotions through visual arts, music, performance, multimedia or other means of artistic representation. I can use multiple forms of media to convey learning.

Apply Numeracy
I can think and express ideas in quantitative terms. I know how numbers connect and relate. I can estimate and figure out the correct solution when I see a problem. I can create and evaluate mathematical expressions and equations for a given situation. I am numerically literate and can use my skills in a variety of contexts to make wise decisions.

Analyze Data & Information
I can conduct observations, interpret information, identify patterns, differences, relationships and reach conclusions. I can sort, analyze, and represent information in a variety of forms to others. I can make predictions based on what information tells me. I use data and information to substantiate claims. I can survey and interview.

Evaluate Spaces, Shapes & Conditions
I can effectively use measurement and evaluation in a wide variety of situations and contexts. I use measurements in order to design, build and modify. I understand the relationship between angles and measurements. I can identify shapes and provide proof of their classification. I can track changes in conditions and the long and short term effects of these changes.

Investigate Scientifically
I can ask questions, do research, and make hypotheses. I can test my hypotheses, analyze results, and draw conclusions, and I can use this information to deepen my understanding of the world around me. I can apply the scientific method beyond the science classroom to investigate real world problems.

Think Critically & Design Solutions
I can distinguish between facts and opinions. I can analyze, synthesize and evaluate information to guide my actions and beliefs. I can formulate and raise questions. I can assess and draw inferences from sources. I can develop responses beyond what is rote. I can navigate complex situations. I can design and build solutions to complex challenges.

Manage My Relationships
I have the agency and skills necessary to successfully create and maintain positive relationships with a broad range of diverse people. I can prevent, manage and resolve interpersonal conflict and make decisions that build social capital and contribute positively to my community.

Conceptualize Growth & Development
I can conceptualize how living things develop and how we design objects in relationship to their environment. I understand how complex systems, both living and built, function and the interdependencies within them. I can apply my understanding of living things and systems in a variety of situations.

Synthesize Systems & Processes
I can analyze how parts of a system interrelate and work together over time. I can break systems into their component parts. I can understand the organization and structure of a system at different levels. I can identify and assemble factors to explain and produce general processes.

Connect to Environment
I can understand my physical, social and cultural environment. I can interact with and adapt to my surroundings. I can operate in different cultural settings. I can explain the impact of personal and collective actions on communities, environment, and society. I can correctly apply concepts of cause and effect and correlation.

Practice Social Responsibility
I can contribute to my community both locally and globally. I can learn from and take the perspective of those who are different than me. I can identify social and ethical norms in a variety of situations. I am aware of the events, people and systems that shape politics and world affairs and I can take action and access power based on that knowledge. I know my own history and culture and value learning the culture and language of others.

Apply History in Variety of Ways
I make sense of my life and take action as a result of understanding the world around me, including the people, places and events that have made the world the way it is. I can use the past in understanding current events, literature, art, people and places. I can identify trends and patterns over time. I can evaluate primary sources.

Use Technology & Media Purposefully
I can engage with media and technology for a variety of reasons. I use computers, tablets, phones and related technology to find, select, organize, and share ideas and information. I can use technology to be more efficient in my work. I can use various forms of media to express thoughts and ideas. I am able to determine bias in media and its effects on consumers. I know that my actions on social media can affect other aspects of my life and will navigate in appropriate and safe ways.

Design My Future
I can author my own story around college, career and life. I have a design mindset and I can plan and implement things myself with little instruction, support or guidance. I can look for opportunities to empower myself and pivot as necessary in dynamic contexts. I can execute successfully when presented with external barriers to my success.

Develop Myself
I can assess my feelings, interests, values and strengths. I have a well-grounded sense of self confidence and can advocate for myself to get my needs met, but can also admit when I'm wrong. I can handle stress, control my impulses and persevere in overcoming obstacles. I can adapt to new contexts and accept critical feedback as an opportunity for growth.

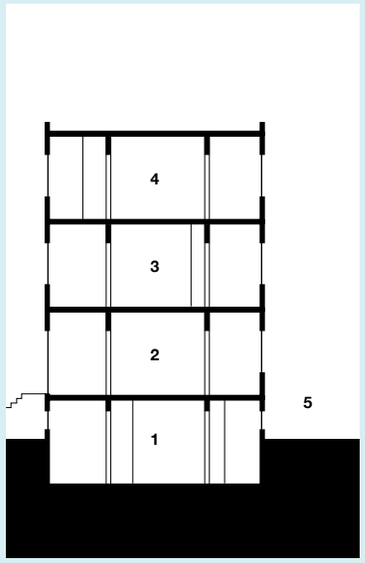
Stay Healthy
I can take care of myself physically, emotionally, and mentally. I can identify harmful situations and know how to respond to negative experiences. I am able to see how my actions affect the wellbeing of others and my environment. I am my body's keeper. I understand how my body works and use that knowledge to make positive choices.

Write Effectively
I can express myself in my own unique voice. I can write to communicate, organize, and record information. I can develop and present a logical sequence of ideas using appropriate structure and conventions. I can demonstrate proper grammar use and mechanics. I can synthesize and properly integrate outside resources into my writing. I can edit language and style both independently and with assistance from peers and adults. I can take different positions for different tasks. I can write to express my feelings and views or to persuade an audience. I can appropriately credit sources of information.

Direct My Learning
I can set goals and manage my trajectory towards those goals despite challenges I may face. I can be self-directed but know how to ask for help when needed. I believe that my abilities will grow with my effort and I value learning as a life-long journey.

Case Study

The Brotherhood Sister Sol



Right
Section through BHSS brownstown facility

1: Art, music, and literature. Space decorated by students.

2: Martial Arts, Town Hall, and dining.

3: Administration. Students encouraged to visit staff.

4: Teen Lounge, resource library, computer hub, multipurpose room.

5: City owned GreenThumb garden, maintained by BHSS staff and students.

Founded in 1995 in West Harlem, The Brotherhood/Sister Sol (BHSS) provides comprehensive, holistic and long-term support services to youth ages 8-22. Their members are a population that has been deemed "at-risk," facing comprehensive socio-economic realities that affect their lives, thus creating a vulnerable population. These disparate realities are reflected in health, employment, early pregnancy, incarceration, schooling, and life expectancy disparities.

Their theory of change is to provide multi-layered support, guidance, education and love to members, to teach them to have self-discipline and form order in their lives, and then to offer opportunities and access so that they may develop agency. The organization's themes are: Community, Knowledge, Positivity, and Future.

The BHSS offers wrap around evidence-based programming. The organization focuses on issues such as leadership development and educational achievement, sexual responsibility, sexism and misogyny, political education and social justice, and global awareness. BHSS provides 4-6 year rites of passage programming, thorough five day a week after school care, school and home counseling, summer camps, job training and employment, college preparation, community organizing training, and international study programs to Africa and Latin America.

The results are clear. In West Harlem where only 42% of all youth and 34% of Black males graduate from high school, 88% of the BHSS alumni have graduated. Only 30% of youth ages 18-25 in West Harlem are employed full-time or enrolled in college, compared to 95% of BHSS alumni who are either working full time or enrolled in college. 50% of the staff at BHSS are alumni, giving indication to the organization's success in creating a cycle of leadership and commitment to community development.

Much of this tremendous work takes place directly in their 4-story brownstown building in West Harlem. Each of the floors is a unique micro-environment that helps to support different programmatic goals. The basement level is home to the Mind, Body, & Spirit room equipped for explorations in sculpting, painting, digital art, literature, and music. Chapter leaders at BHSS recognize that the sound studio, equipped with industry standard recording technology, has been a key draw for keeping many youth out of trouble by catering to their interests in music production.

The facility's top floor has everything from a Teen Lounge lined with college banners from BHSS alumni to a multipurpose Library which plays host to comic book club, environmental programs, writers collective, and even yoga. Unlike the rest of the staff who work from the 3rd floor, Chapter leader, Juan Tavarez, has a desk on the top level, all by design. His work area is at the intersection of the multipurpose room and a bay of computers and college-prep resources, offering him as an ever-available guide to the student members. Privy to the impact of environment, Juan intentionally displays photographs of historic men like James Baldwin. "It's a visual learning opportunity. When the kids see this picture and say 'Who is that?' it offers an opportunity to teach them some history. It really works."

Case Study

NYC iSchool

Left
Experienced students teach novice users how to 3D print.

Right
The curriculum encourages use of high and low tech tools.

Launched in 2008, the NYC iSchool was founded to rethink high school for 21st century skills. Based on core values of innovation and individualization of the student experience, the iSchool provides an example of how schools can and should redefine themselves. The iSchool model is successfully merging the pedagogical ideal of meaningful and relevant learning experiences that teach big ideas and valuable skills, with the realities of accountability, college preparation, and adolescent development.

Most importantly, though, the iSchool model is rooted in a willingness to ask "why?" and "what if?" - to question what has always been, and to shift our focus from what's easiest and most efficient for adults or the system, to build an experience for each student that is personalized and that provides the range of experiences that will truly equip them with the academic foundation required for success in higher education and the critical 21st century skills required for success in life.

The school's core beliefs are: Adolescents thrive when given choice and responsibility, Learning has to be real world relevant, and Learning has to be individualized. As a result, students benefit from off campus excursions, frequent contact with industry experts in class, and freedom to curate their own schedules.

In service of its core values of innovation, individualization and personalization, and metacognitive skill development, and with the reality of the system and the unique needs of adolescents in mind, the leaders developed a four-prong model: 1) online learning (for rote, state mandated material), 2) challenge-based courses, 3) advisory, 4) core experiences. Supporting these four instructional approaches are three important systems: student scheduling, individual student mastery tracking, and the school's Area of Focus program. In its entirety, this model allows the school to meet system and accountability requirements, to support students' developmental needs, to prepare students to get into and be successful in college

All classes, except core, are mixed grade. 9th grade students don't just go to English class, this core subject is presented through concepts – I Learn, I Analyze, I Argue.

It's the 9-week challenge modules that provide best indication of the school's success. During one of the challenges, students learn explore the world of children's book making. Students from the i-School visit a class of 1st graders in Brooklyn to interview the children about their interests. Using these insights, they then write, illustrate, and craft their own children's book. Their final assessment? Revisit the elementary school and read their book to the children. In another challenge module, students partnered with the Autoban Society NY to investigate bird deaths occurring during southward migration and birds flying into glass skyscrapers.

While the school is off to a tremendous start, the leadership has noted some of its biggest challenges are coordinating off-campus activities and juggling with *time* and *space* in order to make experiences possible. A co-located school, this 430-student school occupies Floors 4 and 5 of a discrete SCA structure also shared by Chelsea High School (Floors 2 and 3).

4
End Users

What role do the school's users play in campus design?

Their needs are critical. Must involve users in designing their future 'home'

So did you involve students in designing the school?

Yes. Interviewed them, had them react to diff class settings, and saw how they'd redesign campus

any teachers and staff, or community members?

got staff perspective on hoods, had them react to diff spaces, let them reprogram school their way

local residents brainstormed school-community relations, learning partners, etc

Any other ways you got to know the end users?

Yep! Shadowed a local student, teacher, and resident...got a 1st hand perspective of their daily lives.

Participatory Design

Including the end users in school design increases stewardship, design efficacy, involvement in school life, and likelihood of sustained success.

CO-CREATING WITH THE END USER

	STUDENTS	STAFF	COMMUNITY
1 Discovery	experience impact of space on learning via pop-up classes	tour school neighborhoods and facilitate pop-up classes	map favorite and least favorite places in your neighborhood
2 Visioning	focus group discusses the daily challenges school must address	craft your ideal school configuration using the Design Elements	brainstorm on relationship of community & school
3 Design	redesign your campus to better suit student needs	critique and improve the campus concept design	select partners for school's learning network

Why Engage? Nearly every public project conducted in the United States incorporates some form of public outreach. Based on the American ideal of a democratic process, typical engagement strategies often rely on the public meeting (à la the New England town hall) as the singular forum for policy and design decision-making. But today, in an increasingly global and digital era, these meetings often fall short of reaching the increasingly diverse and information-saturated citizen group. Or, the efforts fail to incite the interest required to achieve the long-term buy-in for planning and design strategies needed to see a project through to successful implementation.

Successful projects leverage the process of outreach into sustained interest in project outcomes. Public process participants, in the most ideal scenario, become the champions of the project through the long road of implementation and the ever more daunting challenge of ongoing governance. In this way, engagement becomes a critical path toward both project realization and design excellence.

Approach and Goals. The Engagement phase is geared toward uncovering the knowledge and experience of all individuals and groups that will benefit from the design of EPIC Schools. This phase consists of a series of assignments, workshops and open houses that will invite participation by walking the targeted groups step-by-step through the design process. Participating individuals will be encouraged to subjectively describe their experiences, openly react to alternative design ideas and freely imagine their own design solutions to perceived problems. Emphasis will be placed on creating a safe place where all ideas and opinions are received with respect and attributed equal importance. The goals for our stakeholder engagements were:

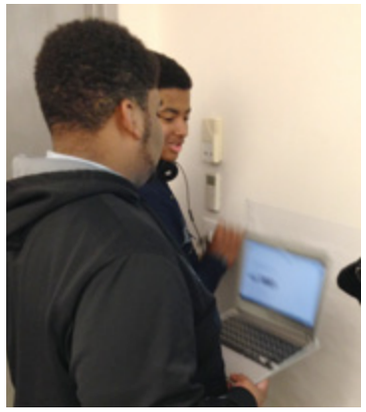
1. **Actively inform the design process** though the collection of qualitative and quantitative data on participant experiences
2. **Promote the vision, goals and values of ESI and EPIC Schools** through effective written and visual communication, professionalism, and respect for all ideas and opinions expressed by participants
3. **Optimize participation** by minimizing jargon and technical language, tailoring activities to the age and demographic of participants, and scheduling workshops at times of the day and week that allow for diverse attendance
4. **Build capacity** by educating participants on the design process and empowering them to formulate and express their ideas

Structure. Participatory design was achieved through a series of workshops targeting three identified groups of end users: students, the ESI team and EPIC staff, and the community surrounding each school. Workshops walked each group of participants through the three-step design process, from discovery, to visioning to design. End user comments, ideas, and designs were recorded and used to shape concept.

Involving Students

Discovery
To understand first hand, or discover, how space affects their experiences at school, we asked a group of 11th and 12th grade students (ESI Student Design Fellows) to participate in two EPIC classes, each hosted in a different venue. The first pop-up class took place in a classroom at NYU Stern School of Business and the second at Boys and Girls High School, a DOE facility in Brooklyn. After each 90-minute class, we asked students to reflect and discuss how the space influenced their comfort, performance, and classroom dynamics.

Results
Most students preferred learning at NYU. They noticed a big difference between the two classrooms when it came to basic needs such as furniture, lighting, and aesthetics. See their reflections on pages 32-33.



Visioning
The student visioning workshop was held to better understand daily challenges that many Brooklyn and Queens high school students face, and how they envision a school that better supports them. In a focus group interview, we gave students from a local school (Brooklyn Generations High School) maps of their campus area and sparked a discussion about challenges presented by the school's location and surrounding area, and student needs that could be better met. The conversation fed into a "how might we…" brainstorming session.

Results
Participants identified prevalent student needs and resources that could respond. Key examples below.
1. Area restaurants are overwhelmed by the onslaught of students and many lock doors and are antagonistic to students. Development of a Student Center, outside of school, could offer additional dining options and satellite location for local businesses.
2. School is a scanning campus and cell phones are not allowed; students are paying local stores a fee to hold their phones. The school or a Student Center can offer phone lockers that allow students to store devices during school hours.
3. Students have no place to study; local library is under-resourced and not used. School or Student Center should have free WiFi, study rooms, quiet areas, computers and printers.

Design
Current students at PS Q226 (campus for EPIC South) were given a challenge. For one week, take pictures around campus of spaces that you like and dislike. Present these to your peers, and identify the most problematic parts of campus. Then work together to redesign these areas to be more favorable to learning from a student perspective. Students' design solutions were documented and used to improve the design of EPIC school facilities.

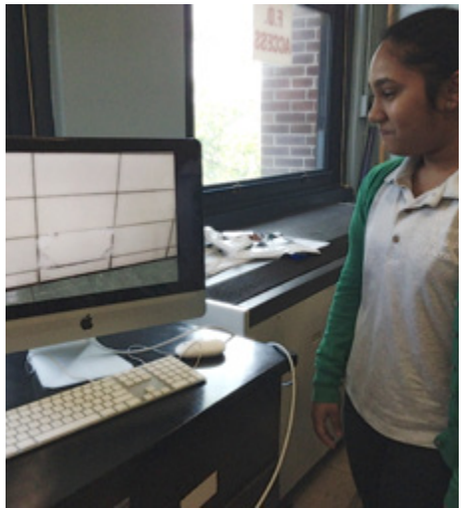
Results
The students' campus redesign featured a new basketball court, dedicated street parking behind the blacktop, resilient chip and stain resistant tiling, plaster finished covers for all piping and mechanical spaces, and an increase of maintenance and hygiene equipment in the cafeteria. More about the workshop, pages 29-30.

Students Design

The best way to see how students would improve their existing campus, let them point out its flaws and redesign it the way they want. That's the premise of our Student Design Workshop and one of the many ways we sought student input.

Have you ever wondered how students would change their school if they had the chance? Our team was curious as well, so we designed this workshop to engage students in the re-creation of their learning environment. First, we asked students to consider the current design of their school campus. This fueled a discussion about the spatial conditions that are favorable and unfavorable to a student's school experience. Finally, we gave participants an opportunity to redesign the spaces which they found most problematic and least supportive. The redesigns provided us with deeper insight into student preferences and influenced the creation of a campus concept for EPIC High Schools.

For our workshop participants, we chose a group of 8th grade students from Virgil Grissom Middle School because of their familiarity with the PS Q226 campus which EPIC South will move into fall 2014. A week before arriving on campus, we asked



the students to begin observing and photographing their favorite and least favorite aspects of the campus environment. The day of the workshop, each student presented two photographs to us and classmates. “I like this because...” and “I don’t like this because...”.

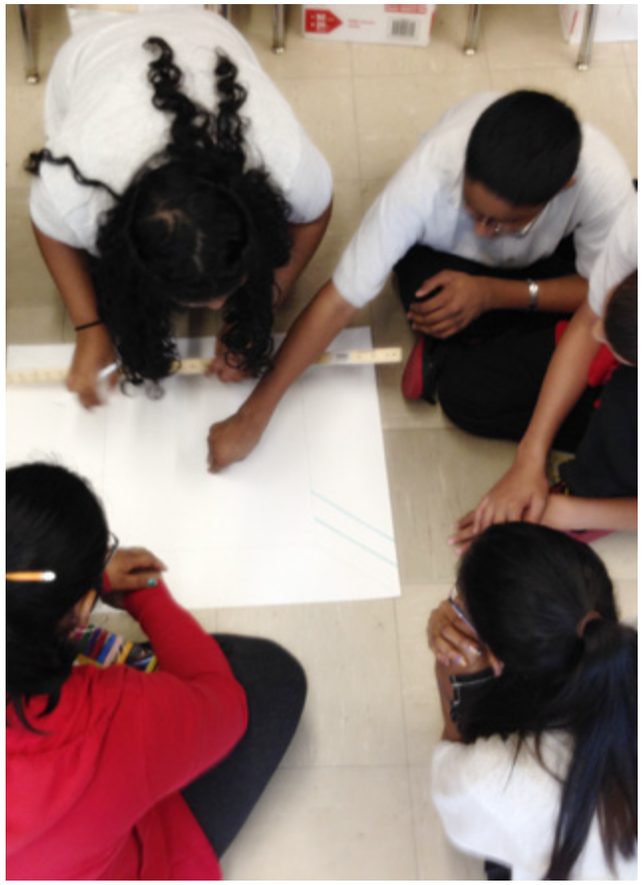
As students presented, we drafted a Q226 pros and cons list for all to see. Successful design features (pros) included a quiet and resource-filled library, a gym with lots of equipment, and hallways and gallery displaying student work. Unfavorable design conditions (cons) identified were out-of-service water fountains, chipped paint and wall tiles, broken clocks and lockers, leaky and unsafe ceiling tiles, hard floors throughout with no soft spaces, unprotected plexi glass display edges, not enough computers, etc. One thing became immediately clear. The campus was not meeting the basic needs required for a successful learning environment and students were being affected.

From the extensive list of problematic areas, students identified five challenges as most pressing and worthy of redesign. These were: 1) chipped walls, ceilings, and floor; 2) exposed and hazardous pipes; 3) primary student entrance located by trash dumpsters; 4) a blacktop (playground) occupied by parking; and 5) a dirty and infested cafeteria. To propel students into their design challenge, DKS architects facilitated a discussion that illuminated examples of well designed products and spaces and how they improve our daily lives. Students were able to transition from dialogue on the ergonomic shape and size of a cell phone and how this makes it easier to hold and use, into a lively discussion on improving campus features.

Students self-selected groups based on which of the five campus features they wanted to redesign and spent the next 30-minutes brainstorming and designing solutions. Group discussions revolved around issues of safety, perception, durability, universal appeal and appropriateness, and personal preference.

The final phase of this workshop allowed groups to present their solutions to peers and DKS. Collectively, the students redesigned their campus to feature a new basketball court, dedicated street parking behind the blacktop, resilient chip and stain resistant tile finishes, plaster covers for all piping and mechanical spaces, increased maintenance and hygiene equipment in the cafeteria, and a relocation of trash dumpsters behind an opaque screen.

The outcome of the Student Design Workshop is three-fold. First, it provides an educational experience for students to learn about design. Second, it alerts schools that currently occupy the campus (Virgil Grissom MS) to areas that need capital improvements. Lastly, it solicits the perspective of current New York City public school students in a constructive manner that is documented, shared, and utilized to improve the design of EPIC school facilities.



Top left
A student shares her photograph of cracking wall tiles.

Bottom left
Students present a design solution for exposed piping.

Below
Participants drafting a solution to improve the unpleasant cafeteria experience.

Can’t Get Enough

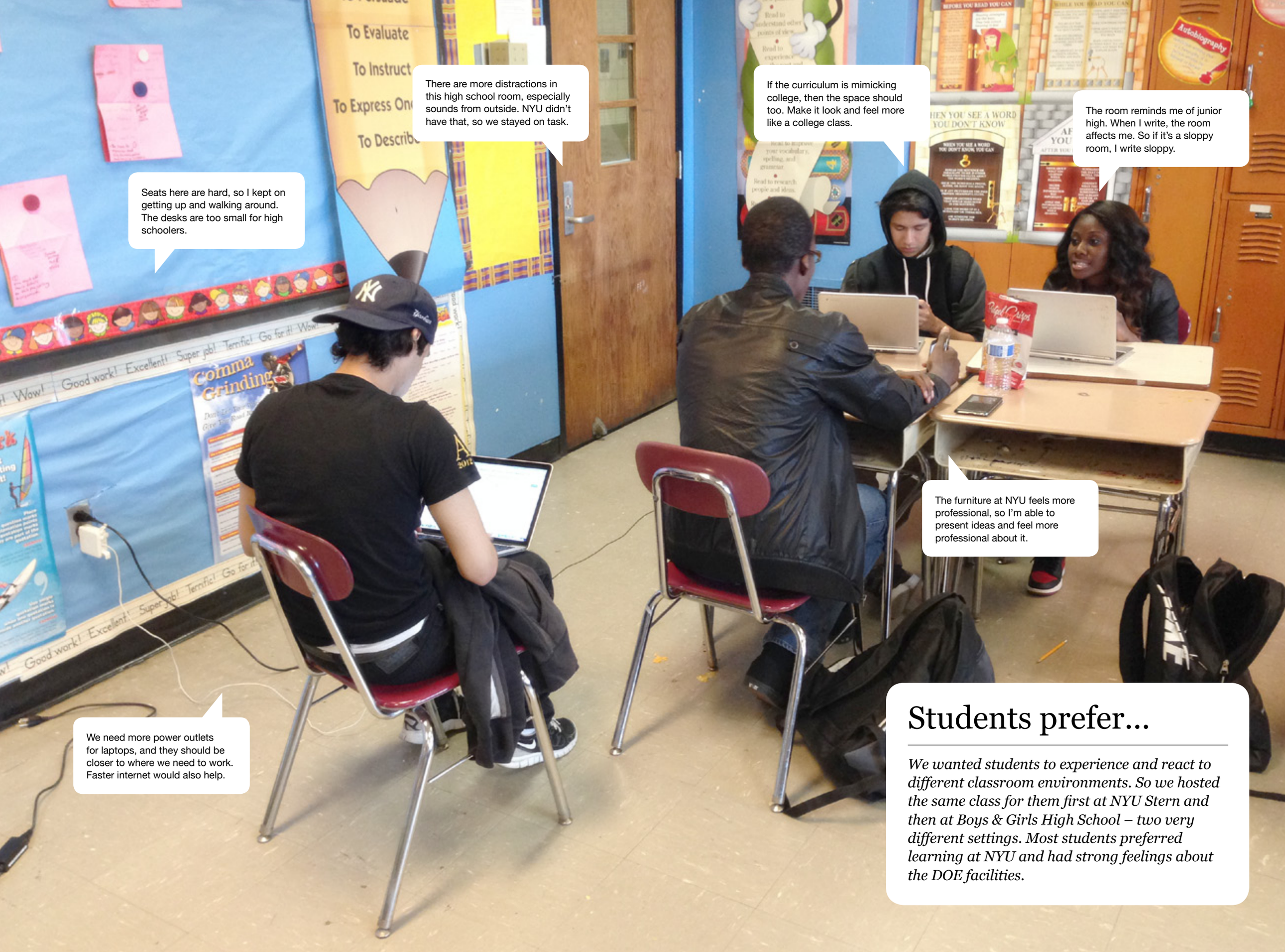
We spent the day with Sandri Frias, a student at Thurgood Marshall Academy. What we learned about teenagers in NYC public schools is that they don’t get enough. Mentoring, movement, space, technology, or inspiration.

18-year-old Sandri Frias lives on the 14th floor of an old apartment tower in the Saint Nicolas Projects in West Harlem. He lives with his mother, older sister, and three younger brothers. Sandri is in his final year at Thurgood Marshall Academy high school on 135th Street. While Sandri is far from ordinary – he is the unspoken leader among his peer group – his daily routine as a teenager living and schooling in the NYC public school system offers a window into the experience of many students. We decided to join Sandri for a day, shadowing him from the moment he got dressed at home in the morning until he ended his day long after the final school bell had rung.

Key Takeaway #1 - Students have little meaningful interaction with adults and mentors. At home, when Sandri wakes up, there are no parents around. There is no family breakfast and no conversation about school today. He is the adult, responsible for getting himself and 4-year-old brother Isael to school. Without an adult engaging him, the young Isael plays a violent video game, replete with zombies and heavy artillery, while waiting to be walked to nearby Utopia Children’s Center.

At school, Sandri has surprisingly little interaction with adults. When adults do speak to Sandri or his classmates, it’s usually to reprimand them for infractions (ex, headphone usage) or grant them permission to move (ex, open a window, use the restroom). Sandri’s classes can be characterized as one-way dialogue with the teacher instructing students. In fact, the first meaningful interaction we noticed was during lunch break. At the local convenience store where Sandri buys a sandwich, the clerk asks him and a friend what their post graduation plans are and if they are going to college.

Key Takeaway #2 - Students sit all day, and sitting is exhausting. All but one of Sandri’s classes, the exception being his Literature course where the class was rehearsing a play, required students to sit in the same position for the



Students prefer…

We wanted students to experience and react to different classroom environments. So we hosted the same class for them first at NYU Stern and then at Boys & Girls High School – two very different settings. Most students preferred learning at NYU and had strong feelings about the DOE facilities.

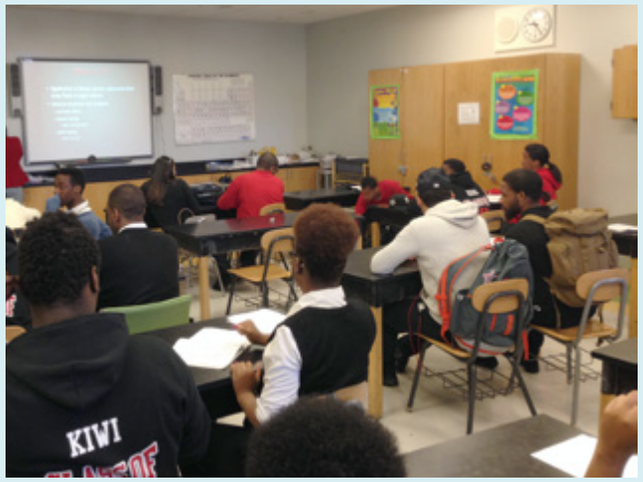
entire 50-minute duration. This includes the Physical Education course where students were reprimanded for utilizing sports equipment; the instructor engaged 12 students in a game of volleyball, while 60 others sat with nothing to do. Students almost never move, and this is exhausting. Most of their day is spent passively absorbing information. By midday, they are lethargic, aching to stretch, and physically and mentally checked out.

Key Takeaway #3 - Space and technology are used ineffectively. At any given moment, there are classrooms overstuffed with students and other rooms that are mostly empty. Sandri's Literature class was forced to rehearse a Shakespeare play in a room 30% smaller than a typical classroom. Even with furniture stacked, there was hardly enough space to move or act. Overcrowding gets worse during his Statistics course. The 37 students in this traditional room makes it "impossible to focus." So Sandri skips this class and works on his own. Since the library is used for classes and the school has no other common spaces, his only option is to work in the echoing gymnasium. Did we mention that English is held in a science lab and his Economics class of 9 students uses a room intended for 20?

Technology is also poorly utilized. While many students have smart phones or tablets, they are discouraged from using these as learning tools. Instead of these powerful devices, students are expected to rely on the lonely desktop in the corner of every room. An opportunity is squandered. Technology isn't incorporated into learning. It serves only as a distraction, a student's way of finding stimulation amidst an uninspiring school experience. Learning tools used only for listening to music or gawking at YouTube videos of street fights.

Key Takeaway #4 - Classrooms are dreary, cluttered, uncomfortable, and uninspiring. This is not a fact isolated to Thurgood Marshall Academy. Many of New York City's students are expected to learn in environments that hinder their progress. During our time with Sandri, we experienced this first hand. Lighting was dull and made it difficult to read what teachers wrote on the board. Rooms are generic and every class felt essentially the same. The one-size-fits-all environments didn't do a great job of supporting different subjects and class sizes.

Above
The only adult who asks Sandri about his plans for the future is the store clerk at the local food mart.



Below
Students are required to sit still all day.

Classrooms have too much clutter (useless decorations and artifacts) which obstructs views and gets distracting. Throughout the school, spaces are painted in drab colors and built with hard, uncomfortable materials. Hard chairs, hard floors, hard walls.

Key Takeaway #5 - Attending classes isn't enough to develop skills for college readiness. At the end of the school day, it's apparent that Sandri hasn't been challenged or supported much. While attending classes is important, it isn't enough for students to develop the skills necessary for college and the professional world. To supplement school, Sandri spends his afternoons commuting to a job at the Thurgood Marshall Academy lower school in West Harlem. He mentors third grade students in the after school program there. Guiding the children through planned activities (reading, homework, recess) helps him develop valuable communication and problem solving skills. Today, after work Sandri makes his way to the Harlem Children's Zone on 116th Street. He needs help with college applications. The Employment and Tech Center provides him with tools and guidance on his financial aid applications, scholarship search, and resume.

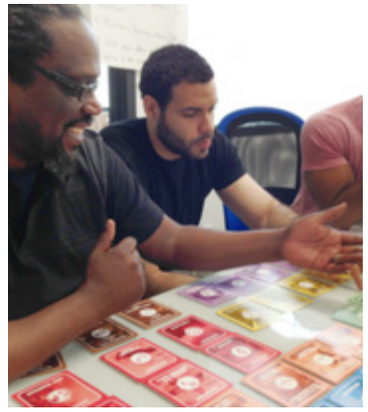
Sandri is, of course, a proactive and aware student. His experience is unique yet indicative. These are challenges that thousands of students also face. While we only shadowed him for a day, he assured us that the classes we experienced were typical. The lessons learned will enable ESI and DKS to refine the pedagogical and physical design of EPIC Schools. By understanding the lives of students, can we begin to design places that center around their needs and aspirations.

Involving Staff

Discovery
The EPIC staff (ESI School Design Fellows) participated in two sets of discovery workshops organized by Danish Kurani Studio. First, guided neighborhood tours around each of the new EPIC campuses. On the walks, participants were asked to carefully observe their surroundings in efforts to 1) better understand the communities that EPIC schools will merge with, and 2) uncover potential learning opportunities in the built environment and public sphere. Observations were individually recorded and used to steer a team discussion about school surroundings.

During the second set of workshops, EPIC staff participated in pop-up classes enabling them to live-test the new curriculum in different classroom environments. The first pop-up took place in a classroom at NYU Stern School of Business and the second at Boys and Girls High School, a DOE facility in Brooklyn. Two staff members facilitated the exercise with students while remaining staff track spatial dynamics such as teacher movement, acoustics, student groupings, surface usage, attention, etc. After each class, participants reflected and discussed how the space affected curriculum implementation.

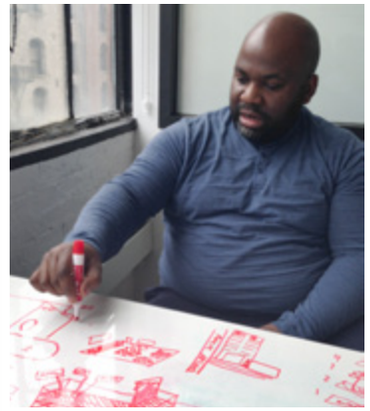
Results
For staff reflections on the neighborhoods surrounding EPIC North (North Richmond Hill) and EPIC South (South Ozone Park), see pages 36-37. For staff reflections on pop-up classes, see pages 38-39.



Visioning
Based on our four design levers – Basic Needs, School Model, End Users, Context – DKS created a set of 34 Design Element playing cards that could be used to construct the ideal EPIC campus. These elements fell into seven programmatic areas: Socialization & Collaboration, Discovery, Culture, Health & Recreation, Production, Transitions, Interaction & Media. Design elements ranged across various scales, from room signage and furniture to off-site satellite spaces.

During the visioning workshop, staff were asked to break into their respective campus groupings (EPIC North, EPIC South, Nelson Mandela School). Each team was asked to consider the catalogue of Design Elements and build an ideal EPIC campus using only 25 elements. To help their decision-making, teams were also provided with 'design implications' and 'key takeaways' from case studies, student workshops, neighborhood tours, pop-up classes, and ethnographic shadowing. The element cards also allowed for participants to tailor the design to better suit their school's unique context and end users.

Results
For more see pages 42-43.



Design
Once the DKS design team had crafted a conceptual floor plan and visions for each space at EPIC High, the staff was invited to an interactive design review where they could openly provide feedback on how to improve the design.

Results
Participating staff recommended several improvements to the concept floor plan:
1. Eliminate the Computer Lab. Laptop computers will be ubiquitous, and numerous spaces on campus should accommodate technical workshops.
2. Add a dedicated (quiet) space for Targeted Support.
3. Add movable cube seats – similar to those in the discussion pit – in the typical flex classrooms.
4. Design the Broadway studio to accommodate a range of activities from dancing to boxing to parkour. Add a padded wall.
5. Add a computer station in each classroom, including flex and production suite.
6. Specialty walls, such as GeoSurface, don't need to be repeated in every Flex classroom.
7. Add a Drafting Cake wall to a few of the Flex classrooms.

Both Queens neighborhoods could use more recreational and green space, places to hang out, congregate. It's hard to see where students unwind and give their minds a break.

The area near EPIC North, there is not a great deal for students to do or to just 'hang out'. This is a good opportunity to design the school in a way that it can become a community space to do things.

We could have the students learn about other cultures by running a taxi service for international travelers from JFK.

Richmond Hill and Ozone Park have many strengths: between two subway lines; cultural foods and stores; proximity to JFK airport; availability of housing; lots of small business.

There are obvious and subtle ways people have marked their 'cultural' territory. Names of stores, the type of videos sold in movie video shops, clothing stores, etc. There is also an older White population that might feel displaced.

The local businesses don't represent (my assumption) the types of things that students will want to be/do when it comes to domain identity as a worker. So it will be interesting to see how we either 1) bring different experiences into the school or 2) reinterpret that landscape in a different way.

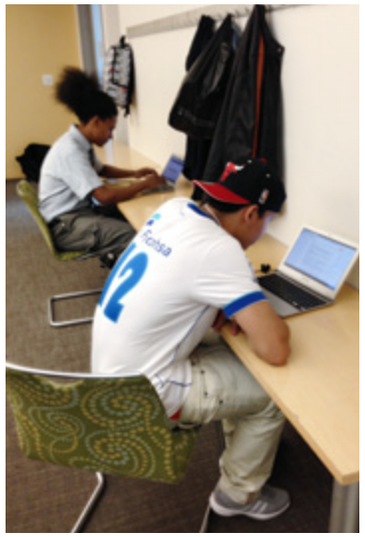
What if we had every business in the neighborhood assess student work on a project related to their business (or be a guest speaker).

Each location has the potential to be a great learning experience... Local food markets are about produce. But they are also about accounting and supply distribution chains and cultural choices around the things they keep in stock.

What's around

ESI School Design Fellows and EPIC staff toured the neighborhoods around each campus. We asked them to observe surroundings to
1) better understand the communities that EPIC schools will merge with
2) uncover potential learning opportunities in the built environment and public sphere.
Their reflections are above.

Pop-Up NYU Stern



During the pop-up class at NYU, the ESI fellows were asked to record observations while two of the fellows facilitated a curriculum activity. Below is a summary of their responses.

Technology
The NYU classroom was able to accommodate all forms of technology needed for this activity. Students primarily needed laptops and access to internet. Having more laptops would have been ideal, since most students were sharing.

Surfaces
Students and facilitators both utilized multiple surfaces in the room, including the tabletops, blank walls, and white boards. No one used the floor as a working space. Because there were few laptops, students stayed mainly close to one another leaning on table tops. If we had designated areas of the room for specific tasks or parts of the process (ex: group brainstorms happen on the whiteboard), we might have seen more work on whiteboards or floor.

Acoustics
Background noise was imperceptible and did not affect class. Minimal noise from air conditioning and hallway traffic did not interfere with discussion. Classroom was removed from the perimeter of the building and underground. No street noise. Individual students and groups have enough acoustic separation and privacy to think and work independently without distraction. When facilitator was speaking, his voice was amplified and received clearly. Students' voices were also heard clearly when in whole group conversation. However, having barriers between individual work areas and the rest of class would have helped.

Participation and Focus
When being introduced to the project, all students were engaged, participating, and focused. When working individually or in groups, most students were engaged, participating, and focused. When teams were presenting, all students were engaged, participating, and focused.

Furniture and Fixtures
Furniture in the NYU space was appropriate for the types of movements, collaborations, activities that students were asked to undertake. It may be useful to consider multiple projection spaces on the walls of our classrooms. Currently, there is a "front" of the classroom. At certain tables, students had their backs to the screens. This may not be a big deal but could decrease comfort if they are continually twisting around. For the most part, John (facilitator 1) was in one area of the room and Vadewatie (facilitator 2) was in the other. Not sure if this was intentional

and planned, but I wonder if the layout of the room basically pinned them into specific areas.

Facilitator Comments
The openness of the space and the ease with which we could move the tables and chairs was great for working with small groups and individual students. It was nice for students to have access to the whiteboards for planning. I was able to sit in with each of the teams because there was ample space at each group location. I was able to work with an individual student in a focused way because he had room to work independently. It was easy to bring multiple groups of students together because of the way the tables were arranged, the amount of space we had and the mobility of the tables. Having stations were helpful. There wasn't much time lost in re-arranging the furniture.

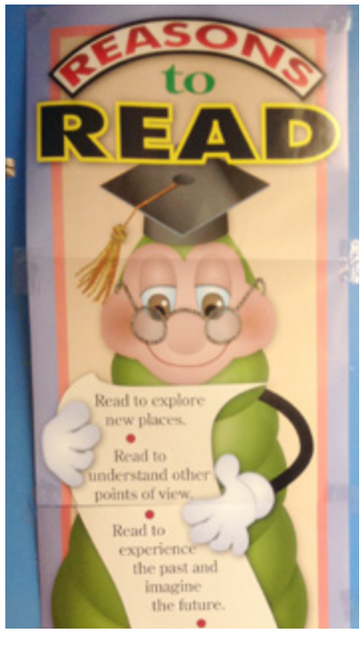
Pop-Up DOE School

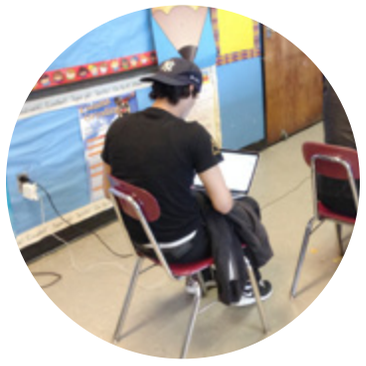
For the pop-up class at Boys & Girls High School, we attempted to keep as many variables (besides the physical space) the same as the previous class. The activity, facilitators, and students were kept constant. ESI fellows were again asked to record observations. Below is a summary of their responses.

Technology
The Boys & Girls classroom did not accommodate all forms of technology needed for this activity. Most of the resources within the Educurious unit were blocked since the project was about gun control. More time spent on troubleshooting tech issues that could have been spent on teaching. Need different places to access computers than just at a desk.

Surfaces
Students only utilized the tabletops for working and facilitators only utilized the chalkboard to jot instructions. Walls, floors, and smartboards were not used.

Acoustics
Background noise was heavily distracting to the class. LIRR elevated line





goes by often and creates a noticeable disturbance. Sounds in the hallway can be heard clearly in classroom. Furniture (chairs) makes noise when moved across the floor. Individual students and groups do not have enough acoustic privacy to think and work independently without distraction. Voices travel in the room. Conversations naturally increase in volume. When facilitator was speaking, his voice was faint but intelligible. I would recommend using materials that dampen sound, especially from outside. Consider using furniture that provides acoustic isolation for individuals and groups.

Participation and Focus
When being introduced to the project, most students were engaged, participating, and focused. When working individually or in groups, half of these students were engaged, participating, and focused. When teams were presenting, all students were engaged, participating, and focused. Certain aspects of the space kept students from staying focused, including: loud noises, too much clutter and posters, age inappropriate seats and materials, lack of outlets in the right places.

Furniture and Fixtures
Furniture in the Boys & Girls space was not appropriate for the types of movements, collaborations, activities that students were asked to undertake. Desk are different, dirty, and really small (for middle school kids). Chairs are really hard small and uncomfortable. Desks have to be moved in order to have a "collaborative" space. Not enough electrical outlets for computers. Prompts, scaffolds, etc. as posters are extremely low level (middle school). I would recommend getting desks that have laptop spaces, group tables, and more seating that folks can lounge in while they type/work on computers.

Facilitator Comments
The space felt uninspirational. The familiar elements of a typical classroom have a negative connotation for me. The chairs were uncomfortable, the desks were not easy to move around. Noise from train and others talking prevented me from hearing students. Outlets for computers were only in a few areas. Lost internet connection. The poor acoustics and difficulty of moving the furniture made me less inclined to change the seating configurations for different purposes. I would recommend clearing the clutter and having more inspirational visual cues.

Teacher Needs

We spent a day with Christina Jenkins, teacher at the NYC iSchool, to gauge what types of environments creative teachers need (and the challenges they face).

Christina is an educator interested in creativity, illustrated fiction, and animation. Her students explore design, film, journalism, comics, maps, games, people, and many other things. She even has a blog to share their adventures with the world, http://roomfourzerotwo.com. We joined her on a typical Monday when she teaches Physical Computing, Board Game Design, and Global Feminism.

Key Takeaway #1 - The classroom environment is a teacher's way of signaling what s/he expects.
In Christina's classroom, a sign on the board reads, "This is Room 402. We ask questions, make things, and think out loud." Another sign implores, "What good shall I do this day?" An entire wall is dedicated to displaying learning tools – conductive sewing threads, scrolls of butcher paper, MaKey MaKey invention sets, and even a DIY Aerial Photography Balloon Mapping Kit.

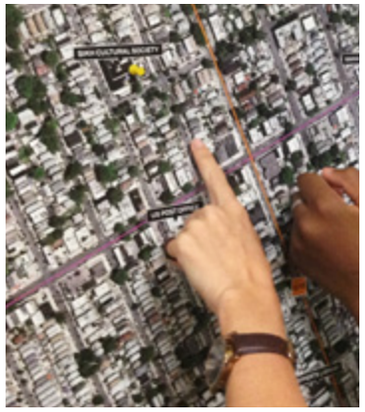
Key Takeaway #2 - Diverse spaces and surfaces allow for richer learning experiences.
On project days, Christina floats from group to group checking in and helping them through roadblocks in their work process. She often asks them a question or gives them a small challenge, walks away, and returns once they have solved it. Students use dry erase desk surfaces to draw through and compute solutions. Christina is a big fan of these desks, and loves the immediacy of being able to think through problems on the surface in front of you. When asked about her room, she notes, "Once in a while, I may want, for example, a soft setting where students are sitting on soft cubes. But we don't have that. So it's not that my room has to be flexible enough for that, I actually like stability, but I want that space somewhere in the school. I also wish we used the outdoors more often."

Key Takeaway #3 - Multiple teams collaborating in one room gets noisy and distracting.
During Board Game Design class, a typical 18 students filled the room. They worked in groups of 3-6 people, mostly typing out game rules or drawing and making things with plastic, markers, and posterboard. One student struggled to think through a problem, as a nearby group discussion distracted him. While the room has ample space for 18 students, it lacks the acoustic and physical separation needed for four or five simultaneous discussions. This would likely be the case for project-based curriculum that emphasize collaborative work.

Design Elements

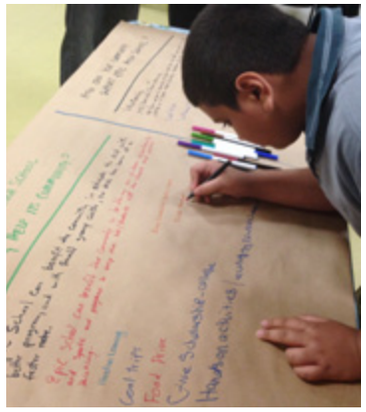
To begin forming the EPIC campus, our architects drafted a set of design features that respond to school needs. Features ranged from the scale of a dining hall to a chair. Each school's leadership team (3) was asked to construct an ideal campus using just 25 elements. Teams were allowed to tailor features. Decisions from the workshop helped shape the campus concept.

Involving Community



Discovery
For each new school, the community workshops (discovery, visioning, design) were combined into a single, open-house event. Participants were guided on a discovery process via three distinct activities. First, they were greeting by EPIC staff and engaged in discussion about the new school model and offerings. Next, the participants examined large maps of their neighborhood and identified where they lived, places they like, and places they dislike. Finally, a facilitator interviewed participants, prompting them to reflect on whether their personal routines and cultural rituals were supported through their home or neighborhood environment.

Results
From the mapping exercise, ESI School Design Fellows and DKS were able to get a local, lived perspective of each neighborhood's strengths and challenges. There was general consensus among participants about the "undesirable" places in their neighborhood, primarily derelict areas. Surprisingly, many felt that Richmond Hill High School had also become a campus that was unsafe and unappealing. Given the diverse population surrounding each of the campuses, the culture/space interview yielded scattered results, reminding us that there are many rituals, many identities, and many needs in these communities.



Visioning
The visioning portion of the workshop had two parts. First, participants were invited to share their ideas in response to two questions: How can EPIC High School benefit and help this community, and, How can this community help EPIC High School and play a role in its success? All responses were visible for everyone to read and discuss. Afterwards, participants were introduced to the 34 Design Elements. They were instructed to review these architectural features and to choose the 3 which they found most useful and valuable to them. Upon making selections, participants were given a dry erase board where they could note their reasoning and provide additional comments to help shape the new campus.

Results
Participant ideas for how the school can help their community included: organizing food drives, offering cooking and computer science classes, building a community garden, and hosting motivational speakers. Ideas for how the community could help the school included: parents serving as aides, non-parents volunteering in school events, and business owners mentoring students and/or providing internship opportunities.
To view a sampling of which Design Elements participants preferred, see pages 48-49.

Design
Community members were also engaged in actively designing the new EPIC schools. As part of establishing a framework for the school to harness local resources, potential, and opportunities, we sought community input. Workshop participants were asked to examine a catalogue of potential learning partners for the school. This included various local businesses and organizations from various sectors: Arts, Hospitality, Science, Media, Medical, etc. Participants were informed that based on the most popular partners, DKS would work with EPIC leadership to design any physical spaces or links needed to host or connect school to partner.

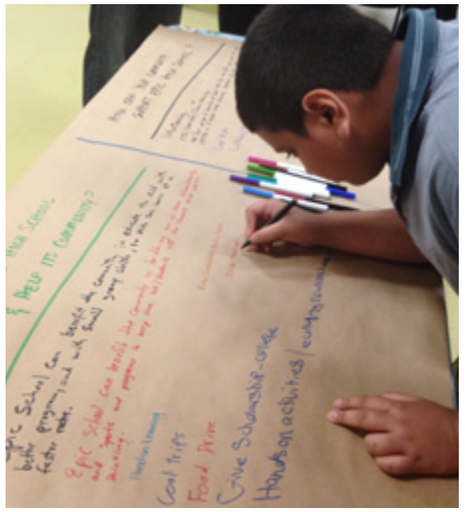
Results
The top learning partners selected were YMCA, Bedstuy Restoration Corp., Brooklyn Workforce Career Center, Make the Road, and various local universities. Across the board, participants showed a preference for partnering with organizations that provided professional and real world expansion, personal growth, and recreation opportunities.

Learning From Locals

Our open-house workshops gave a stage to local residents and families to share ideas on how EPIC Schools and host communities can work together. Interactive stations invited individual and anonymous participation, while openly displaying the collective opinion.

It was very important for the design of EPIC Schools to have input from the local families, residents, and workers that would be affected by the new school openings. Equally important was tapping into local knowledge regarding social dynamics, civic needs, and the predominant culture of education. To gain input and insights, DKS hosted community engagement workshops for each of the three new schools. The goal of workshops was to collect participant experiences that could inform design, promote the vision of EPIC Schools, and optimize participation by eliminating cultural and technical barriers. To accomplish this, the discovery, visioning, and design workshops were combined into a single, open forum event that took place in the public library nearest each school campus. Forums were open all afternoon and evening and multi-lingual facilitators guided participants through the stations to ensure they were able to access and comment on all topics.

Discovery. Participants were guided on a discovery process via three distinct activities. First, they were greeted by EPIC staff and engaged in discussion about the new school model and offerings. Next, the participants examined large maps of their neighborhood and identified where they lived, places they like, and places they dislike. Finally, a facilitator interviewed participants, prompting them to reflect on whether their personal routines and cultural rituals were supported through their home or neighborhood environment. From the mapping exercise, ESI School Design Fellows and DKS were able to get a local, lived



perspective of each neighborhood's strengths and challenges. There was general consensus among participants about the "undesirable" places in their neighborhood, primarily derelict areas. Surprisingly, many felt that Richmond Hill HS had also become a campus that was unsafe and unappealing. Given the diverse population surrounding each of the campuses, the culture/space interview yielded scattered results, reminding us that there are many rituals, many identities, and many needs in these communities.

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Top left
A student shares her photograph of cracking wall tiles.

Bottom left
Students present a design solution for exposed piping.

Below
Participants drafting a solution to improve the unpleasant cafeteria experience.

Show Me the Amenity

We spent three days living with Hassan Karimi, a resident of Bed-Stuy. What we learned about young, urbanites in the neighborhood is that they crave simple public amenities like grocery stores and recreation facilities.

Hassan Karimi is a 30-year-old single professional, renting a room in a 3-bedroom apartment on the corner of Putnam and Lewis Avenue in Bed-Stuy. He works as a building and zoning law consultant for William Vitacco Associates in downtown Manhattan. Hassan has lived in Bed-Stuy for the past 4 years. He is neither a long standing resident or a new youngster drawn in by gentrification, but a good average of the two groups. Thus far he is a big fan of the neighborhood, particularly fond of the great housing options and community feel where "everyone at least nods or says hello to one another."

Key Takeaway #1 - There is nothing convenient about the commute. Monday through Friday, Hassan makes the 10-minute walk to the A-train on Fulton Avenue and rides for 20 minutes into Manhattan. He frequently comments that there is no grocery store anywhere on his commute path, and how much local residents would love an organic grocer. Though many new restaurants and bars are finding homes in Bed-Stuy, residents must still walk to the north end of the neighborhood, near the J-train, to find a full-sized grocery store.

Key Takeaway #2 - Young professionals (and most residents) need amenities. According to Hassan, there is plenty of good housing and schools nearby. What's missing is things to do in the evening. There are just a couple of bars, but little other social hubs. To get his weekly social fix, Hassan has to travel to other parts of Brooklyn where the night scene is more alive. Another missing ingredient is recreation spaces. The many schools all have gymnasiums and sports fields, but these are typically off limits for locals. Given the existing crowd and the newcomers to the neighborhood, he predicts that facilities such as a yoga studio and fitness center would thrive. "More activities geared towards young adults," he says.

What Do I Want

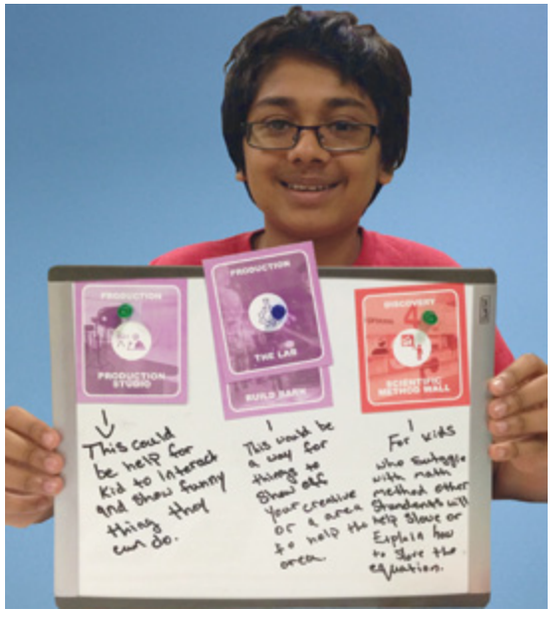
Locals considered a range of architectural and programmatic features for EPIC schools, and chose the 3 that would be most useful and valuable to them.

Resident, Bedstuy

Ministry of Culture would help people get to know each other's culture and values. This would enable children and parents to communicate and come to a better understanding. The Broadway Studio would allow families to learn about health and review their way of life. This will encourage them to be more proactive in their health.

Parent, Bedstuy

Shangri La because prayer changes things. The Test Kitchen because it provides a way for people to relate to one another's cultures. The Mini Stage because it allows children to display their talents and could be a catalyst to bring life and people to the school. It would be an attraction.



Resident, North Richmond Hill

I think combining The Lab and Build Barn would be good. Kids could show the community what types of creative things they can make and do. The Scientific Method Wall would be good for kids who struggle with solving problems.

Parent, Crown Heights

I think the Progress Bar is a great way for students and teachers to keep track of their goals. The Broadway Studio would help with aggression and exercise for students and parents. A Private Room could give us a place to talk about student's learning.

Resident, Ozone Park

The Test Kitchen could help train people to trace the ecology of food, and provide shared experiences of cooking and eating together. I really like the Partnership Incubator. This would give students real world experience and enable them to realize projects in conjunction with local experts and professionals.

Grandparent, Bedstuy

I enjoy helping solve problems. The Community Health Tracker would help keep track of things globally, which is a good approach. The Test Kitchen would be great because knowing how a farm grows and cultivates food is important for knowing what to put on your table.

Resident, Bedstuy

The Community Health Tracker is important because students and community members need to be active in improving their local environment and taking responsibility for one another. The Garden would help community be more conscious of healthy food options and hold food distributions in the community to higher standards. Eat healthy, live healthy!

5
Context

What's Context and why consider it during design?

Every school is influenced by and influences its neighbors, city, social and political climate

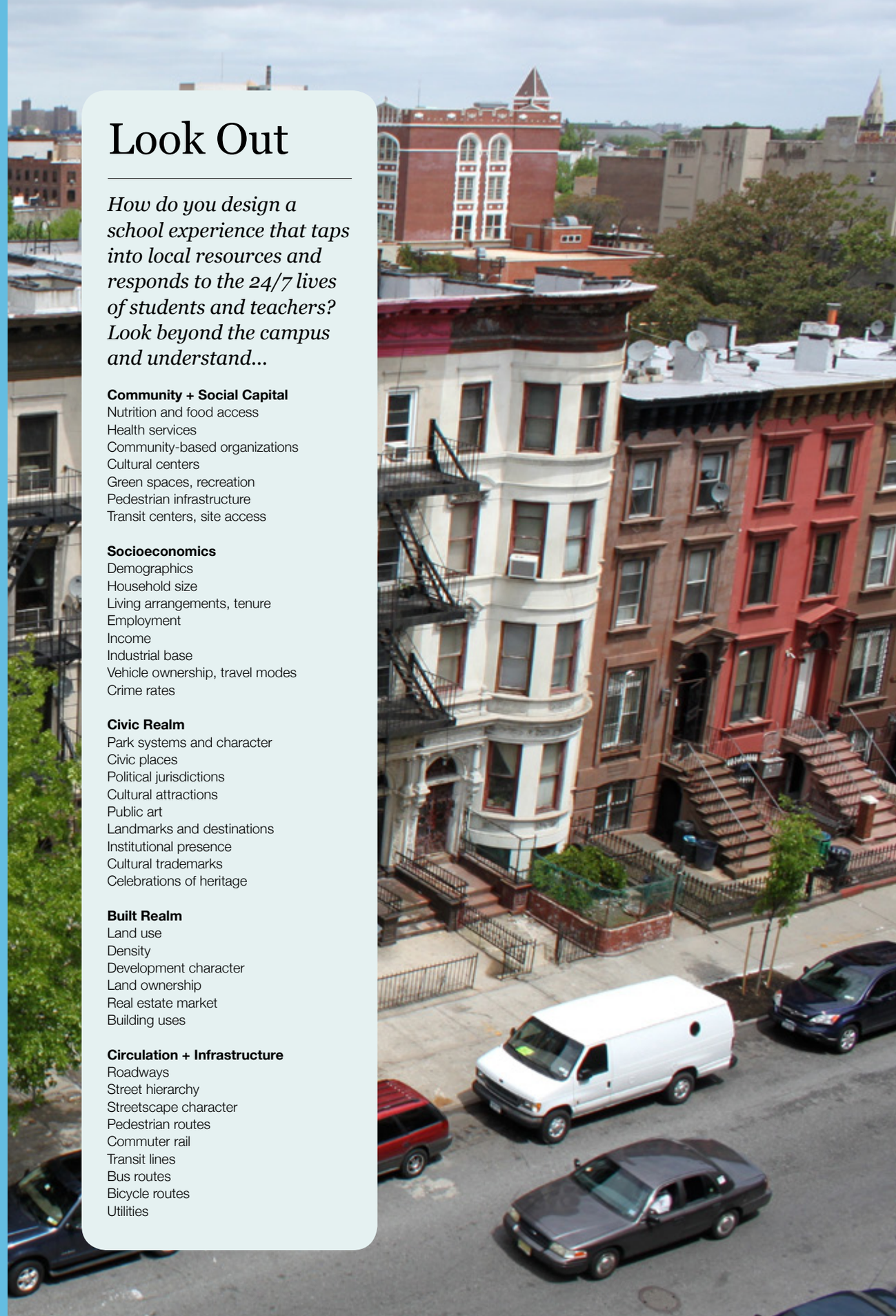
plus kids learn everywhere, even on the streets. Why not get to know the streets? #advantage

so for each school, what do you look for in the context?

culture, community capital, socioeconomics, learning opps...

what did you learn about the different EPIC sites?

Ex: more cultural diversity by Queens campuses, but BedStuy has more educated parents



Look Out

How do you design a school experience that taps into local resources and responds to the 24/7 lives of students and teachers? Look beyond the campus and understand...

Community + Social Capital
Nutrition and food access
Health services
Community-based organizations
Cultural centers
Green spaces, recreation
Pedestrian infrastructure
Transit centers, site access

Socioeconomics
Demographics
Household size
Living arrangements, tenure
Employment
Income
Industrial base
Vehicle ownership, travel modes
Crime rates

Civic Realm
Park systems and character
Civic places
Political jurisdictions
Cultural attractions
Public art
Landmarks and destinations
Institutional presence
Cultural trademarks
Celebrations of heritage

Built Realm
Land use
Density
Development character
Land ownership
Real estate market
Building uses

Circulation + Infrastructure
Roadways
Street hierarchy
Streetscape character
Pedestrian routes
Commuter rail
Transit lines
Bus routes
Bicycle routes
Utilities

North

Richmond Hill
EPIC North High School will occupy the former Richmond Hill High School annex, a site shared with and owned by St. Benedict Joseph Labre Church. The campus is situated in the Richmond Hill neighborhood of Queens, the home of New York's largest Indo-Guyanese population. Over the past two decades, an influx of South Asian immigrants to south Richmond Hill has added to the neighborhood's diversity. The use of native languages such as Hindi, Cantonese, and Spanish in households is an important factor in preserving identity and cultural heritage. With this ethnic mix comes a multitude of religious facilities, which appear to be the only place that the neighborhood's high percentage of youth and young adults can congregate.

Of the three EPIC campuses opening in 2014, this one is surrounded by the lowest living density. One and two-family homes make up the area's primary residential uses, with clusters of multi-family buildings found mostly in proximity to commercial corridors (Liberty and Atlantic avenues) as well as in the vicinity of bus routes and subway stations.

South

South Ozone Park
EPIC South High School will co-locate at PS Q226, also the home of Virigil Grissom Middle School, Haughtry Creek Middle School, and the D75 Special Education Program. The campus is situated in the South Ozone Park neighborhood of southwest Queens. A point of racial convergence, South Ozone Park has a concentration of African Americans, Hispanics, and Asian populations. There are twice as many mixed-race residents than Queens and five times more than in New York City as a whole. The area's cultural diversity is reflected in the presence of numerous churches, mosques, and Hindu mandirs within walking distance of campus. However, the neighborhood lacks certain lifestyle amenities such as parks and recreation spaces. Students at EPIC South would require a 20-minute walk to access the nearest park.

Buses provide the best transit access through the neighborhood, as the closest metro stop is the A-train at the Liberty/Lefferts intersection. Primarily surrounded by residential streets, Rockaway Boulevard provides the school with an assortment of shops and restaurants.

Mandela

Bed-Stuy / Crown Heights
The third EPIC school opening in 2014 is named in the honor of Nelson Mandela and located in the historic Bed-Stuy neighborhood of Brooklyn. The Nelson Mandela School for Social Justice will co-locate at the Boys & Girls High School campus. A number of other institutions are located in proximity to the campus, including several medical institutions, museums as well as some colleges and universities namely the Pratt Institute. These have contributed to the influx of young people living in the area.

While crime and gang activity is still an issue in parts of the neighborhood, Bed-Stuy and Crown Heights are far from the stigma of violence that once defined the area. The neighborhood remains a predominantly African American community, but in the last decade, the number of white and mixed-race households has increased in Bed-Stuy and the possibility of gentrification seems imminent. Although realtors have labeled the area "an undervalued market" and a recent home sale exceeded $800,000, the neighborhood maintains a strong sense of community, identity, and permanence.

Richmond Hill
EPIC North is located in Richmond Hill (Queens), a true melting-pot of multiple cultures and ethnic groups with a high concentration of foreign born residents.

North campus is surrounded by abundant religious institutions (and facilities) and the expansive Forest Park.

The school has access to multiple subway lines (J, A) and bus routes. Streets are generally pedestrian friendly.

South Ozone Park
EPIC South's neighborhood, South Ozone Park (Queens), is well known for its 400,000 sq ft casino and proximity to John F. Kennedy Airport, 6th busiest in the country.

Only 34% of South Ozone Park residents have a high school degree, compared to the New York City average of 80%.

The community board is active in flood resilience programming and Jamaica Bay waterfront revitalization.

Bed-Stuy / Crown Heights
Mandela campus sits on the edge of two neighborhoods, both predominantly African American populations working in Service and Sales sector jobs.

The neighborhood is seeing an increase in property values and the number of Zagat rated restaurants.

The construction of Brooklyn's new bus rapit transit system will connect the school neighborhood to Williamsburg and Coney Island.

6
Concept Design

So tell me about the campus design for EPIC

Well, our concept is more of a guideline than a fixed design

Concept is shaped by constants- learning model, target users, avg facility. Yet designed to adapt to different locations and conditions

what makes the concept special?

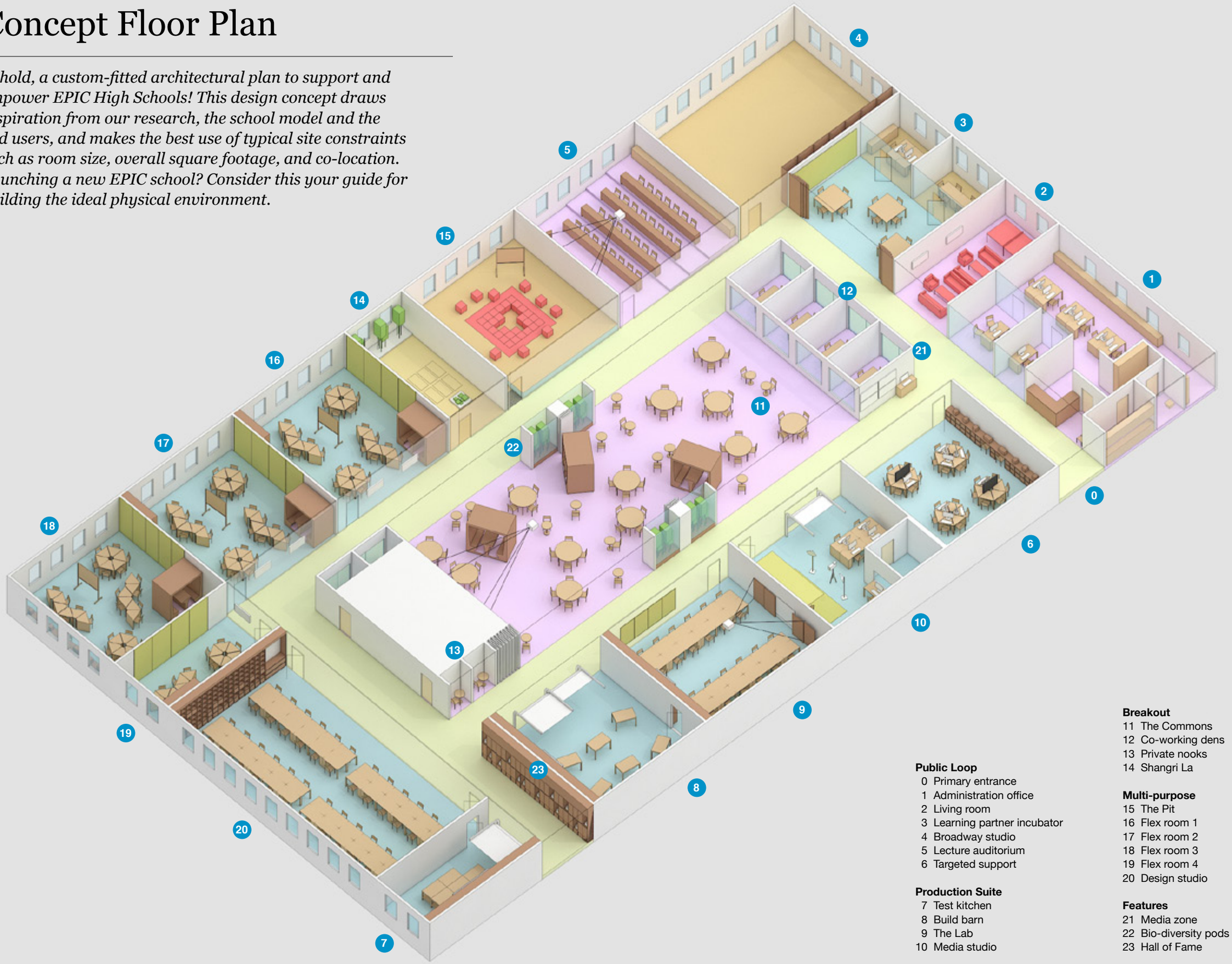
specialized spaces that support unique experiences and modes of working, rather than subjects

the space promotes learning in a way that is relevant and lasting

Neat. Looking fwd to seeing this in action!

Concept Floor Plan

Behold, a custom-fitted architectural plan to support and empower EPIC High Schools! This design concept draws inspiration from our research, the school model and the end users, and makes the best use of typical site constraints such as room size, overall square footage, and co-location. Launching a new EPIC school? Consider this your guide for building the ideal physical environment.



Public Loop
- 0 Primary entrance
- 1 Administration office
- 2 Living room
- 3 Learning partner incubator
- 4 Broadway studio
- 5 Lecture auditorium
- 6 Targeted support

Production Suite
- 7 Test kitchen
- 8 Build barn
- 9 The Lab
- 10 Media studio

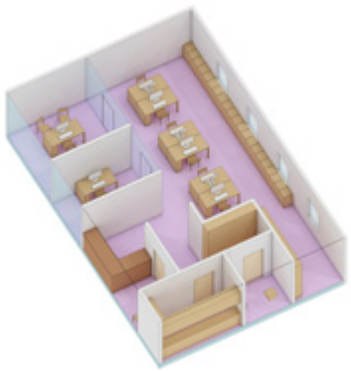
Breakout
- 11 The Commons
- 12 Co-working dens
- 13 Private nooks
- 14 Shangri La

Multi-purpose
- 15 The Pit
- 16 Flex room 1
- 17 Flex room 2
- 18 Flex room 3
- 19 Flex room 4
- 20 Design studio

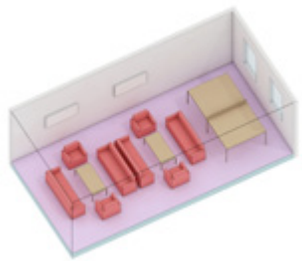
Features
- 21 Media zone
- 22 Bio-diversity pods
- 23 Hall of Fame

Catalogue of Spaces

Here are the primary spaces that make up an EPIC High School. This catalogue does not include typical support spaces (restrooms), shared amenities (gymnasium, cafeteria), external spaces (Trust Forest, community garden, Startup Storefront), and smaller features (Media Zone, pompidou pipes) which are illustrated in the narrative images that begin on page 62.

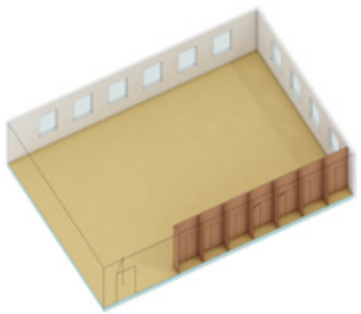


1 Administration Office
Principal and Assistant Principal have private offices with glass on either side to allow for transparency between them and their students and staff. There is a small reception area with chairs and coffee table. The office has a small bathroom, kitchen and pantry, administrative working tables, staff mail room, print/copy station, and storage.

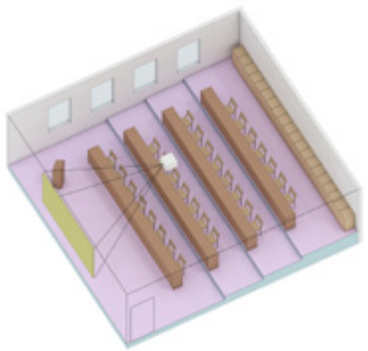


2 Living Room
Has clusters of comfortable sofas, tables, and individual seating. There is a ping pong table, Xbox game console, and television streaming world news. One entire wall is dedicated to books, board games, and reference materials. The opposite wall has InfraMap graphics which visually compare the different subway networks of Paris, New York, and London.

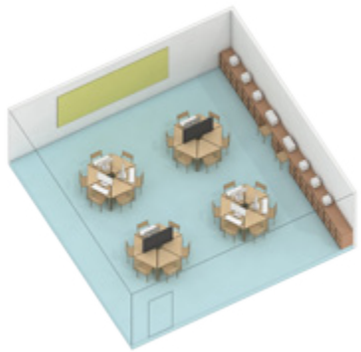
3 Learning Partner Incubator
On site industry partners and workplace experience. Space will be occupied by a learning partner – a company or organization that can provide valuable learning experiences for students – that the staff has selected. The incubator has two glass-enclosed offices and a large instructional area where experts can collaborate with and train students. In the instructional area, one wall is dedicated to displaying the current work of the Learning Partner and another wall displays student work. The incubator is strategically located in the Public Loop so Learning Partners and their affiliates can access the offices throughout business hours.



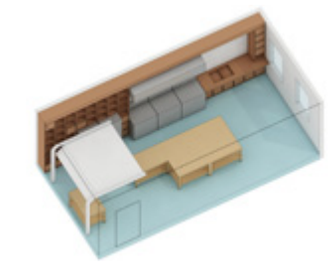
4 Broadway Studio
Multi-purpose space used for physical activity. Hardwood floor. The front wall has equipment storage and is also covered with mirrors similar to a dance studio. The west wall is entirely padded to allow for contact sports such as karate and kickboxing. Comes with roll out mats perfect for yoga and aerobics. Ceiling grid has hook supports for hanging boxing bags or light gymnastics equipment. The studio also has a sound system hookup for easy iPhone or laptop connection. Glass entryway transmits natural light to enter the common spaces and allows students to see the activity inside.



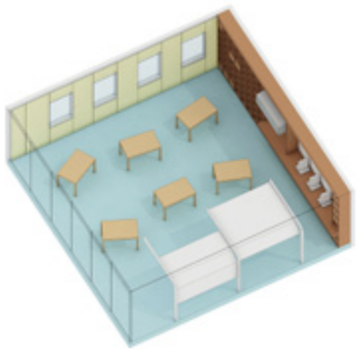
5 Lecture Auditorium
Terraced seating for 30 students. Long, fixed tables with movable, rolling chairs. Room is supplied with presentation podium, projection capabilities, and audio/visual equipment.



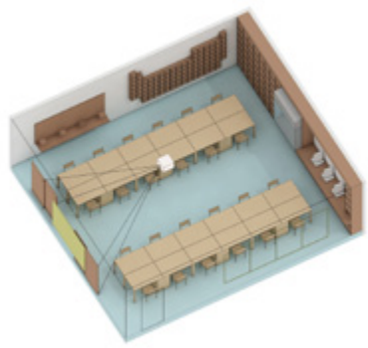
6 Targeted Support
Staff and learning coaches can work with individuals or small groups here. Standard size classroom with reconfigurable workstations, computers, large monitors, and projection screen. This room serves as a hub for printing, copying, 3d printing, and graphics. After hours access for community members, parents, and workshops.



7 Test Kitchen
Laboratory style kitchen empowers students to learn about cultures, history, food processing, and gastronomy all while doing something most of them will love – cooking and eating. Full service with appliances, refrigeration, ample storage, and working tables. Room also has a vast cookbook library, dry erase wall, and graphics explaining the inner workings of our favorite meals and produce.

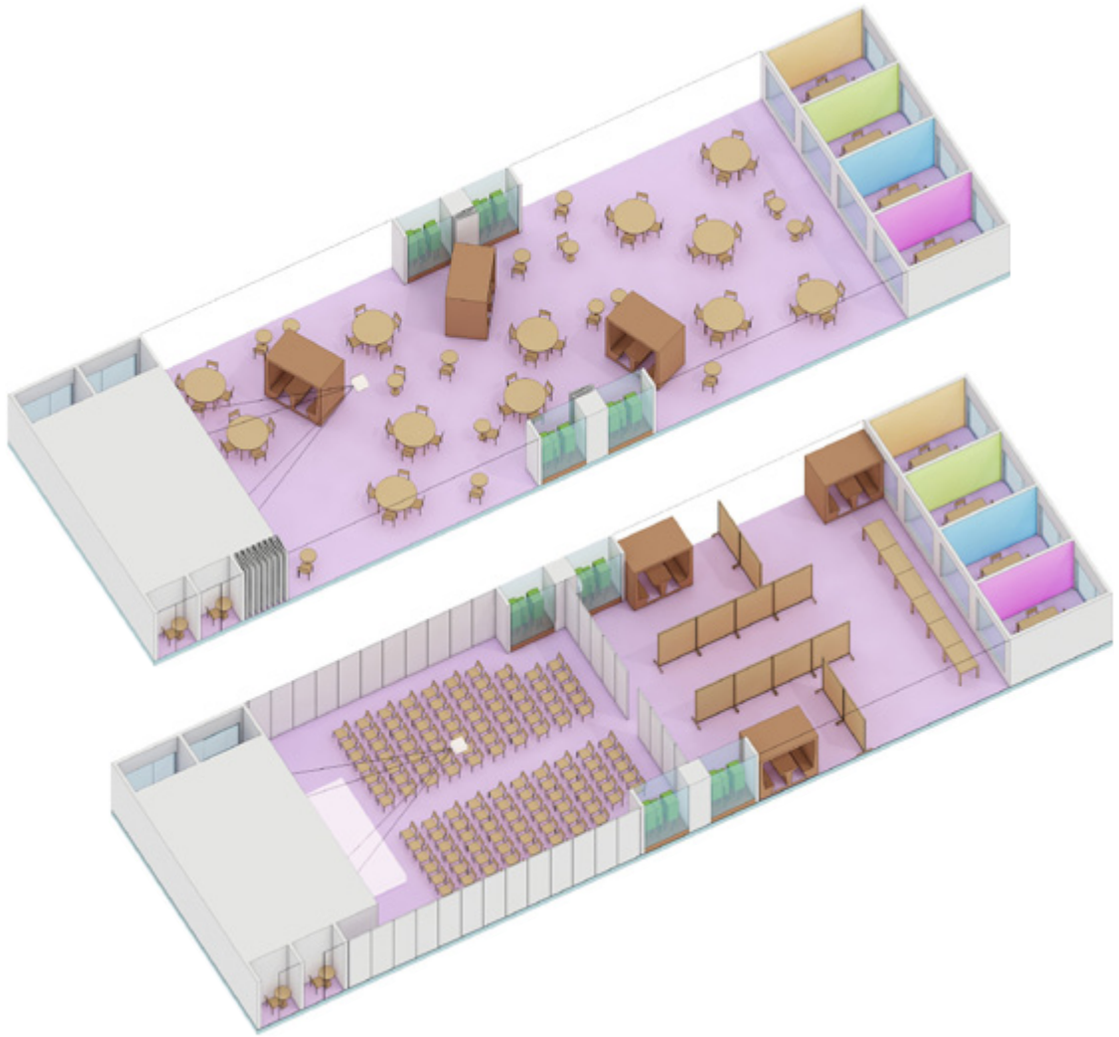


8 Build Barn
Space for breaking-and-making and prototyping. Cheap and replaceable finishes. Basic machine shop setup with tools and heavy duty work benches that are all movable to make space for larger projects or installations. Includes a library of objects and repository for everyday use equipment for disassembly and reuse in projects. Project storage, rafters for hanging things from the ceiling, exhaust and ventilation system, spray paint booth, durable concrete floor, wall panels that can be easily replaced once beaten up. Garage door access for large items.



9 The Lab
A science lab like none other. Supports activities and experiments in Engineering, Biology, and Chemistry. Students can design and build, prototype, and test hypotheses using calculations, chemicals, and interactive tools. Fully equipped with an array of scientific equipment, for students to analyze natural phenomenons. Includes a vertical Drafting Cake, interactive Table of Elements, “How It’s Made” displays that change every month, audio/visual setup to watch inspiring and instructional videos, group work tables, storage cabinets, and a pharmacy shelf for learning about household products.

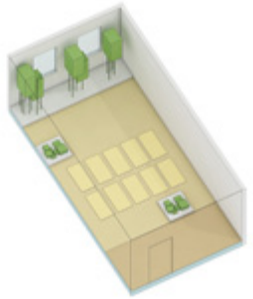
10 Media Studio
Studio supports students in creating and presenting content in audio and visual formats. Includes a sound booth recording box, mixing table, green screen, digital editing computer work stations, and lighting rig. Walls have acoustic padding for sound absorption. Set up and operation is simple and compatible with student friendly technologies such as smart phones and laptop computers. Garage doors for bringing in large props or equipment.



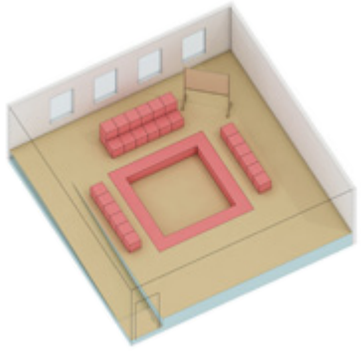
11 The Commons
This is the heart of campus. A large open space to accommodate much of the school's daily life including socialization, congregation and school-wide meetings, meals, special events, breakout sessions, and presentations. With many movable and user-controlled architectural elements, the Commons is dynamic and flexible. In a matter of minutes it can be transformed from a cafe style open space into a large auditorium for presentations or film screenings. Students and staff can easily use built in partitions and rolling walls to create a gallery for project exhibitions. The Commons comes with 4-seat round tables, 1-seat cafe tables, stacking chairs, retractable wall partitions that can be stored adjacent to the bathroom core, a collapsible stage that flips down from the bathroom core wall and unveils a projection surface, a handful of rolling discussion pods, and biodiversity tanks where students can grow different habitats and learn about science.

12 Co-working Dens
The east side of the Commons has 4 small rooms suitable for breakouts of 4-6 people. Each room has a different theme (ex: ski chalet, corporate luxury), so chose whichever environment you work best in! All co-working dens have glass end walls so they give passerbys a view of the learning, thinking, and collaboration happening inside. The glass also provides a level of transparency between students and staff, especially when administrators use these rooms for meetings or teachers use them for curriculum planning.

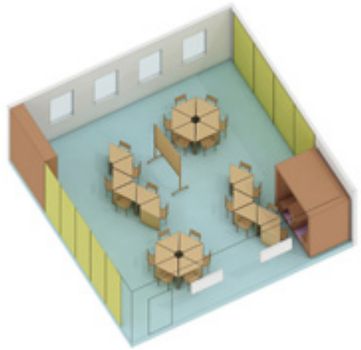
13 Private Nooks
The west side of the Commons, near the bathroom core, has private nooks for solo work. These discrete slip spaces are designed to seat 1-2 people and have a comfy chair, small table, and power outlets. This is a great spot to read for class, research for a project, or make a Skype call to an expert.



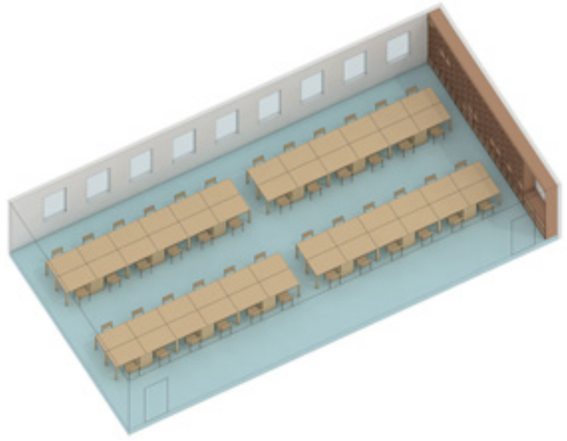
14 Shangri La
This meditation space provides an oasis away from the hustle of a typical school day and the busy city outside. It can also serve as a non-denominational prayer space. Room is acoustically lined for quiet, has soft colors and views to nature. Features a tatami mat floor, bamboo and rock gardens, hardwood floor entryway, audio sound system for soothing tunes, and a glass partition for a sun-lit feel.



15 The Pit
A perfect place to host Socratic debates, the Pit offers the most with the least. This simple room is filled with potential. A raised hardwood floor allows for a sunken "pit" of foam cubes (18x18") that make great seats for students. These cubes can be arranged in endless configurations, scattered in an organic camp fire like setting or stacked to create terraced seating. The walls are painted in dry erase coating. A rolling corkboard is included.



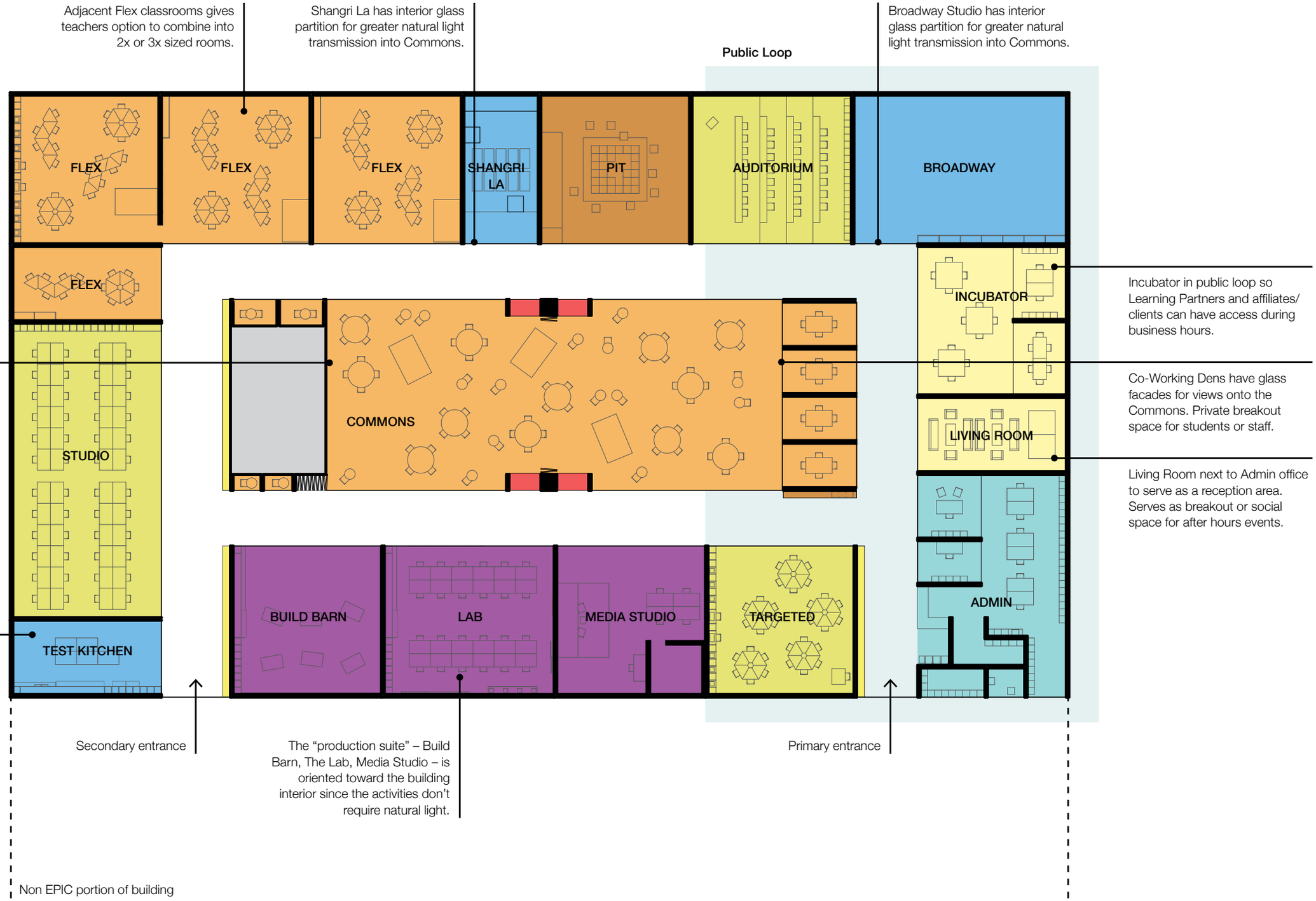
16 17 18 19 Flex Rooms
A series of 4 flex classrooms (3 full size and 1 half size) are sited consecutively to allow for combining and expansion of spaces. Each full flex room comes with 24 modular tables and chairs, dry erase surfaces on walls and table tops, a flat screen television, a wall with built-in storage, and computer and print station. Special features include the Scientific Method Wall as a visual reminder the of problem-solving process, movable Discussion Pod, and GeoSurface maps to help students track global and local phenomenon and events.



20 Design Studio
Similar to college-level design schools, this studio is a place to dream up solutions to design challenges. Students can discuss, sketch ideas, iterate, draft drawings, and create models and prototypes. This 2x space supports 48 students and 2-3 teachers. Walls are corked surface to allow for design pin-ups. East wall is dedicated to project and supply storage. Studio also has sinks and cleanup station, scanners, standard and 3D printers. Ceiling infrastructure is exposed as a reminder that all things are designed.

Rules of the Game

When seeking to implement the design concept onto a school site, there are a few simple spatial relationships that will ensure everything falls into place. These logic-driven guidelines allow the programmed spaces click like puzzle pieces. The closer you can follow them, the more your environment will be able to support EPIC curriculum and activities.



Learner Experiences

To visualize how the new environment will function, how it will inspire and spur change, let's follow two students on their journey at EPIC High School. Michelle and Victor's stories illustrate how this optimized campus can unleash human potential.

Hey there, I'm **Michelle Monlin** and in my first year at EPIC. I'm from South Ozone Park, born and raised. So far this year, I've made a lot of new friends and gotten to try new things like boxing, piano, and even got to work at a marketing firm for a few weeks. I think we have one or two more weeks before final assessments. Anyways, you're welcome to tag along this week. Ciao!

Hi, I'm **Victor Vargas**, 12th grader at EPIC High. I live in Forest Hills with my mom and two younger brothers. I like film production and science – especially biology and things in the natural world. I'm hoping to go to an in-state 4-year college so I can be close to my family and major in biology. This is my last semester of high school. Come follow me on my 5-week gateway project.

MICHELLE

Monday morning, students pour into EPIC High sharing weekend stories. It's the last month before Michelle's 9th grade assessments. She swings by her locker. It's next to the Henry Ford locker this semester. Quick wave to Assistant Princpal Corley and off to 1st period.

Hall of Fame

Students will transform hallways at EPIC High into a Hall of Fame honoring individuals who have shaped the world. Pick a locker. Deck it out as a mini-exhibit celebrating the life and contributions of a game changer - Granville Woods, Amelia Earhart...

VICTOR

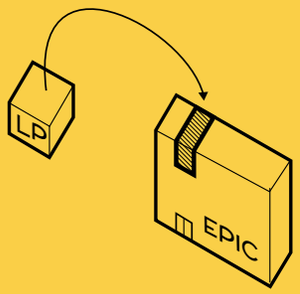
Last semester of high school. Victor's cohort takes over the Incubator. The new EPIC on-site partner is OncoStem Biotherapuetics. Researchers are presenting their latest work and a 5-week challenge for students - determine the Effects of Chemical Fertilization on Long-term Health.

Victor: Yes! Can't wait to work with real scientists on my Gateway project.

Learning Partner Incubator

Learning extended beyond the school walls. EPIC High identifies a company or organization (even if it's not local) that can provide valuable lessons for students.

This learning partner (LP) is invited to reside on campus in the Incubator space. Invitations can be short or long term. Students gain immediate access to expertise and hands-on opportunities.



MICHELLE

Mr. Clemente, 9th grade humanities teacher, is presenting in the Auditorium. "Your project this week - take a stance on US Gun Control. Friday is Open Forum." Michelle and classmates watch videos by the NRA, US government, and activists. Everyone splits. Time to research.

Competencies Supported

- Read Analytically
- Think Critically and Design Solutions
- Apply Numeracy
- Practice Social Responsibility
- Apply History in Variety of Ways
- Analyze Data and Information

Students Say

We took high schoolers to NYU to see how they'd react to working in a college classroom.
"Our high schools have too many posters that clutter the room. A clean, college-looking room makes us feel more responsible and have higher expectations for our work."

VICTOR

OncoStem researchers and EPIC teachers take Victor's class to The Lab. Everyone participates in experiments testing the chemical makeup of everyday produce grown in the US.

Instructors hand out a prompt. Students choose specific vegetables and fruits to conduct further experiments and analysis on. Potatoes, strawberries, pears...

Periodic Table of Elements

Interactive installation. As students learn about elements, they fill in the cubby slots. Last week, Victor brought a Zinc antioxidant tablet for the ZN slot.

Drafting Cake

Many natural and man made systems are comprised of layers. These polycarbonate panels allow students to draw, overlay, and explore layering kinesthetically.

MICHELLE

Michelle conducts her initial research in the Targeted Support room. Teachers are floating. Students gather around workstations... a few connect iPads to larger screens. The TV screen up front is looping Mr. Clemente's slideshow on firearms.

Competencies Supported

- Read Analytically
- Write Effectively
- Investigate Scientifically
- Use Technology & Media Purposefully
- Direct My Learning
- Analyze Data and Information

Targeted Support

EPIC High relies on adults with expertise in meeting the needs of Black and Latino youth, English language learners and students with disabilities. The Targeted Support room enables personalized student learning and becomes a family resource after hours.

VICTOR

Jason: Yo Vic, let's grab some food from the cafeteria downstairs.

Victor: Cool, but let's eat upstairs.

Jason: By the way, how cool was that OncoStem guy this morning?!

Victor: Yeah, he was great. Really got me thinking about the food we eat. Wonder if this stuff has any detrimental long-term effects...

Jason: Guess we'll find out soon enough. What vegetable you gonna examine?

Case Studies

One of the most indispensable spaces we observed in NYC public schools is The Commons. Gathering hub for events, meals, and meetings. Oasis for working outside the classroom. Just ask the NYC iSchool or Bronx Mott Hall - the Commons is the heart.

MICHELLE

Tuesday. Students have returned to school with more research on the gun control debate. Michelle reviews the findings her classmates have posted to the scientific method wall. “This is so different than what I found. I’m actually not sure which side I’m for anymore.”

Next step, Analysis. She sits next to Oscar to see what he thinks.

Scientific Method Wall

Learning scaffold. This tool guides students through the problem solving process. Students post their work on each panel before progressing to the next step.

Geo Surface

Maps of different scales - world, country, city, neighborhood. Students can geo-trace events and topics. Understanding relationships makes it relevant.

VICTOR

Week 2. The class spends a few days in Studio designing systems to grow their experimental fruits and veggies. Victor chose basil, so he’s drafting plans for a hydroponic greenpatch. Mr. Chism swings by and offers feedback.

Competencies Supported

- Communicate and Be Creative
- Think Critically and Design Solutions
- Synthesize Systems and Processes
- Evaluate Spaces, Shapes & Conditions

Mind + Hand

MIT is known for innovation. It’s motto “Mens et Manus” means the mind and hand belong together. John Dewey, High Tech High, MIT all say that understanding derives from activity. In the Studio, students learn by making and doing things.

MICHELLE

After some individual analysis students transition to The Pit for a larger group discussion.

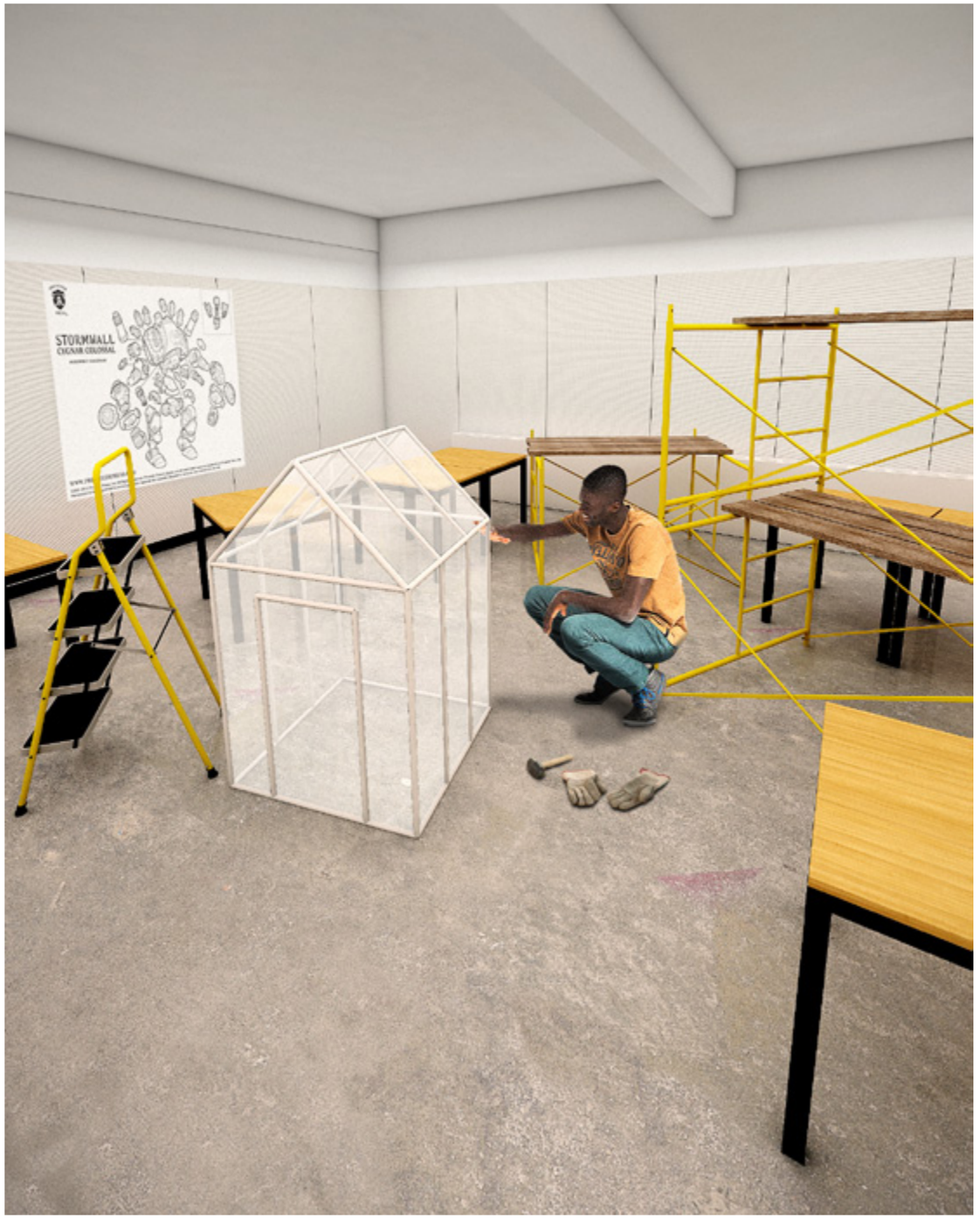
Michelle gets to moderate today. “How does everyone feel about the issue after Research & Analysis?” Principal Bomani joins the debate with some eye-opening anecdotes.

Diverse Spaces

Creating diverse types of spaces on a campus is as much about providing access to education as it is about creating interest and supporting functions.

Just as good teachers scaffold their lesson plans to engage multiple intelligences, school environments should also account for this range of learners.

An environment rich with sensory experiences will engage a higher percentage of students, appealing to their individual learning styles and granting them access to education.

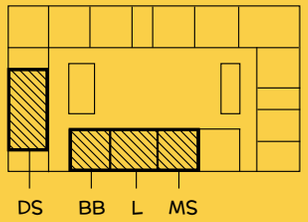


VICTOR

It’s time to turn the design into a live prototype. Victor spends the next two days in the Build Barn. Every tool he needs and plenty of space to get messy.
Victor: This may actually work. Let’s see if basil can grow in here.

Production Suite

EPIC High’s production suite includes the Design Studio, Build Barn, Lab, and Media Studio. A zone dedicated to sketching, designing, iterating, prototyping, testing, building, filming, recording, mixing... and doing!



VICTOR

Victor installs his basil patch in the South Ozone Park Garden located on campus. Will his design for the patch enclosure hold up against the elements? He visits daily.

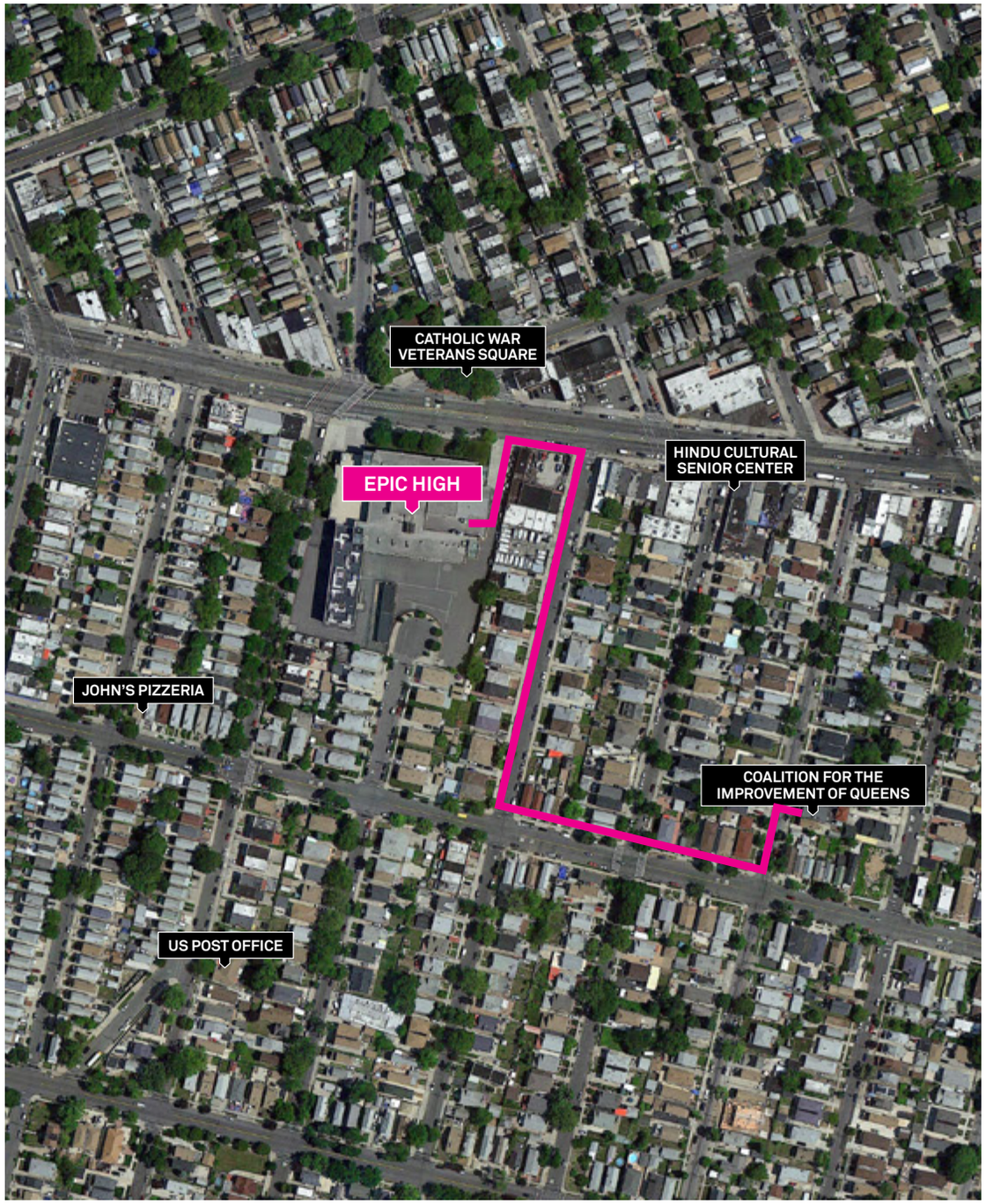
"Let's see what some sun and these super nutrients will do for the crop."

MICHELLE

Late afternoon. This month's Freshmen Rights of Passage day. Michelle's cohort must pass the ropes course in the Trust Forest. Working together, they figure out a way to get everyone across. Michelle was one of the early finishers and now guides the group from below. "Grab Ricky's hand!"

Stakeholders Said

In EPIC workshops, students and staff showed overwhelming preference for the Trust Forest: "Moving from discussion to action - allowing the community to practice what they believe." And the Garden: "To learn about agriculture and get hands on experience with nature."



MICHELLE

Wednesday. Michelle and a few classmates share a stance for more US gun control. Ms. Ferrell accompanies them to an off campus learning partner, the Coalition for the Improvement of Queens - an active agent for mitigating gun violence in the borough.

Competencies Supported

- Connect to Environment
- Practice Social Responsibility
- Communicate and Be Creative
- Synthesize Systems and Processes
- Analyze Data and Information

Learning Networks

The neighborhood is a learning network of educational partners, real world experiences, and urban elements that contribute to the process of education. These elements can be anything from a kid-safe street crossing to an educational sculpture.

VICTOR

Week 3. Monday. Victor spends his morning periods working at EPIC Bike Repair on Rockaway Blvd. As 9th and 10th graders, his cohort researched the needs of their south Queens neighborhood and developed a business plan to launch the repair shop at the Startup Storefront.

On the verge of graduation, Victor endows advice and lessons learned to the underclassmen who will soon launch their own venture.

The Startup Storefront gives EPIC students a place to test their business plans and acumen. Research, plan, design, apply.

Real World Experience

Not only does the EPIC model call for internship opportunities and real world, workplace experiences - so do the students. In our design workshops, students asked for "chances to learn how to start a business". Parents agreed that students need to "get out and learn about jobs."

MICHELLE

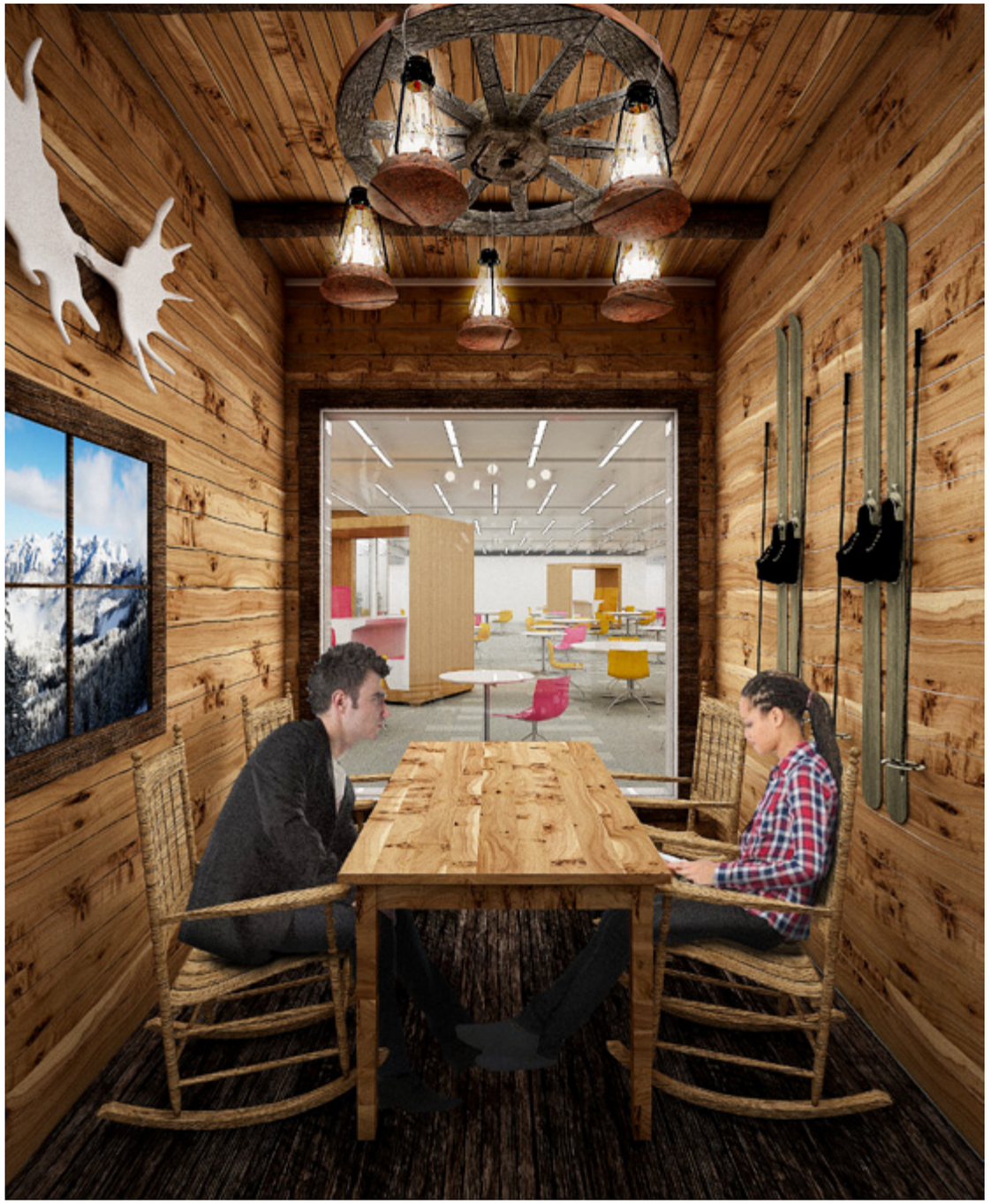
The group returns to campus. Everyone is busy constructing their arguments on gun control. Michelle remembers she has a 2:00pm appointment with her learning coach, Dave. In the Lodge private room. “Michelle, let’s talk about your summer plans..”

Competencies Supported

- Design My Future
- Develop Myself
- Manage My Relationships
- Direct My Learning

Breakout Rooms

Observation. Many NYC high schools lack working spaces, beyond the classroom or library. EPIC High has private rooms that support groups of 4-6 people. For student and staff purposes. Each room is themed - some prefer the Lodge, others like the Gallery.



VICTOR

Today, 12th graders have boxing lessons with trainer, Danny Ortiz. Danny takes the students down to the school gym for wind sprints. After warming up, everyone heads upstairs to Broadway studio for the boxing lesson. Punch! Punch!!

Importance of Play

Physical activity is a fundamental part of development and vital to learning, memory, and well-being. Through play, students are able to practice the skills of conflict resolution, cooperation, sharing, and problem solving.

Stakeholders Said

The Broadway studio is a big hit with students and community members. “We need to promote better health and fitness.” “I would use this space in the evenings.” “A way to relax.” “Students can express themselves.”

MICHELLE

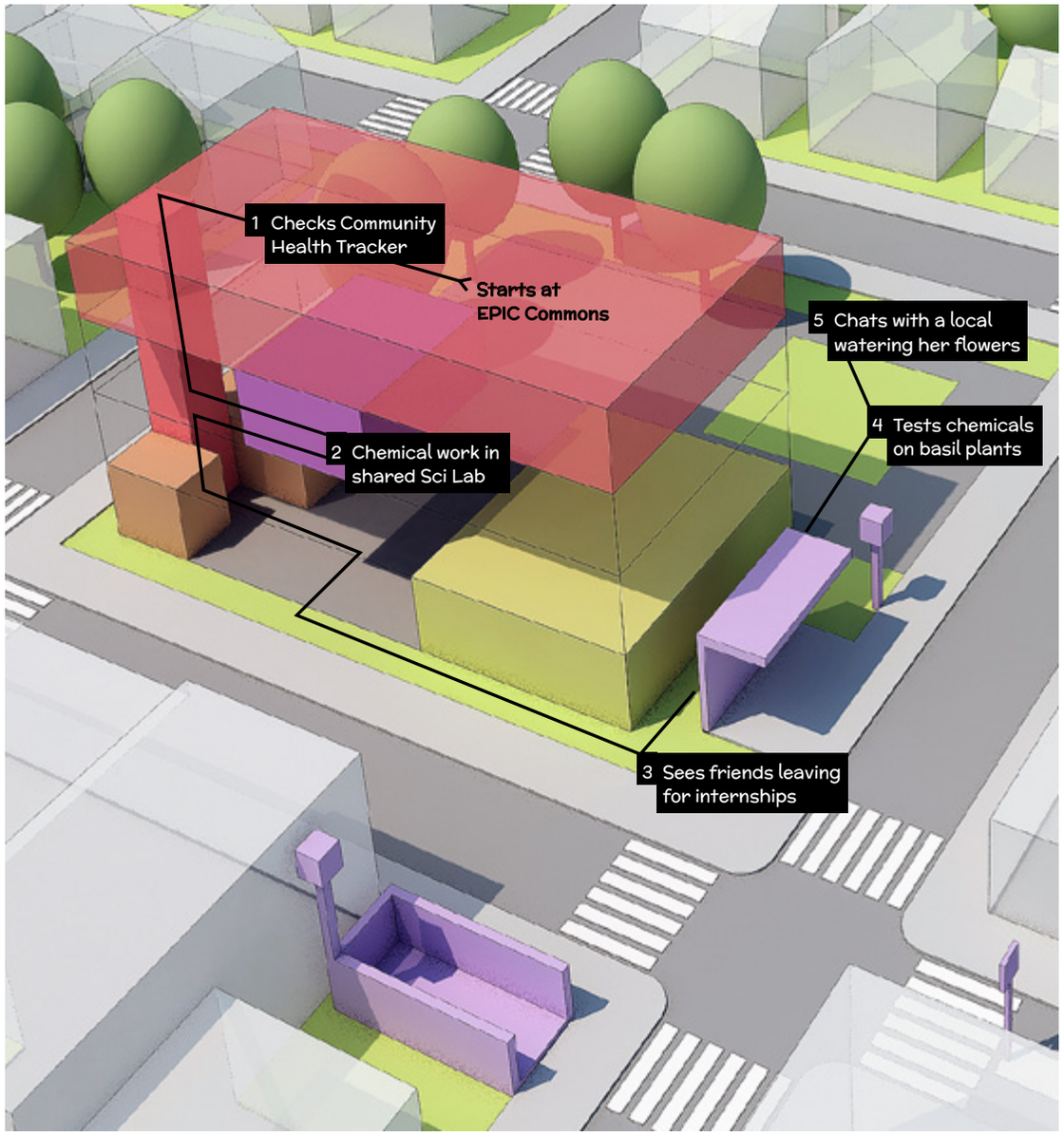
Thursday. Building her slideshow for the Open Forum. Michelle decides to film an interview with the director of the Coalition for the Improvement of Queens. Production Studio is staffed by upperclassmen. She turns to a senior, Victor, for help.

Competencies Supported

- Communicate and Be Creative
- Practice Social Responsibility
- Use Technology & Media Purposefully
- Analyze Data and Information

Production Studio

A visit to Brotherhood SisterSol in Harlem revealed how a recording sound booth can keep kids off the street. An EPIC High counselor remarked, "Bed-Stuy is filled with pure talent without guidance. Creative energy must be cultivated. A music studio could help do that."



VICTOR

Quick peek at the Community Health Tracker to gauge the cohort's engagement with local challenges. "Not bad."
Off to the campus' shared science lab where Victor concocts different chemicals to test. Each of his basil plants will receive a different treatment and then be measured. Back-and-forth between lab and garden. Victor determines how different growing processes and chemicals affect human consumption.

Transitional Spaces

The entire campus influences learners - not just classrooms but also spaces in between. These are prime locations for the Community Health Tracker, Infra Halls, and Media Zone. Every nook and corner is a learning moment.

VICTOR

Week 4. Victor and Jason play table tennis in the Living Room. Their former teacher pops in. "Mr. A, I'm growing healthy basil for my Gateway."
A food enthusiast, Mr. Aukeem suggests Victor examine taste. "Taste could be another reason to avoid chemical fertilizers."

Down Time

Observation. Key element missing from most NYC high schools? Down time. It's proven critical to the collegiate and workplace experience. Having a place to chill out helps us refocus, process, and re-energize. Let's replace some of the fast pace and hard surfaces with slow and soft.

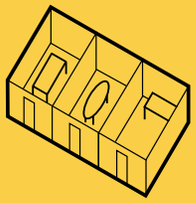
MICHELLE

Friday morning. Last day to wrap up projects on US Gun Control. Michelle is in the Commons, piecing together slides on her laptop. She spots Mr. Corley walking by.

Michelle: Mr. C, have a sec?
Mr. Coreley: Sure, let's grab a pod.

Wall Nook
1 per

Discussion Pod
1-4 per



Breakout Rooms
2-6 per

MICHELLE

Friday Open Forum. Students exhibit solutions for local and national gun control challenges. Michelle Monlin: “Insufficient Federal Gun Control and Its Effect on Teens in Queens”. On the Commons stage she begins,“52% of boys between the ages of 13 and...”

Competencies Supported

- Communicate and Be Creative
- Think Critically and Design Solutions
- Synthesize Systems and Processes
- Practice Social Responsibility
- Use Technology and Media Purposefully

Case Studies

Universities, design schools, and even K-12 schools (High Tech High) have demonstrated the value of a public presentation. Students are more invested in the process and benefit from live feedback. The community comes together and learns. Relationships are built.

VICTOR

Struck by Mr. Aukeem's idea, Victor needs a few moments of silent contemplation to consolidate his thoughts. He sits in Shangri La during his free period. The wheels in his head are churning.

Prayer Space

EPIC schools of Queens and Brooklyn are situated in communities that value religion. Shangri La serves as a non-denominational prayer hall for students, staff, or community.

Personal Space

Observation. If you attend a NYC public high school, you seldom have time and space to yourself. Constant bombardment. Shangri La allows for emotional regulation and peaceful reflection.

MICHELLE

After the Forum, Michelle reviews the Media Zone displaying the audience's Twitter comments about her presentation. She jots down some of the feedback. Quick glance at the Progress Bar around the corner and a smile. "Competencies 18 and 19. Check!"

Competencies Supported

- Read Analytically
- Apply Numeracy
- Design My Future
- Use Technology and Media Purposefully
- Direct My Learning

21st Century Students

Today's youth have mastered the use of social media for communicating and sourcing information. Why not capitalize on this strength of theirs? The Media Zone's live Twitter and Facebook feeds are educational tools. Instant feedback loops, trending news...

VICTOR

Week 5. Wednesday after school. Local chefs, restauranteurs, parents, and students have packed the hallways of EPIC High. Victor Vargas is presenting: "The Effects of Chemical Fertilization on US Food Consumption".

He has used the school's Test Kitchen to set up an exhibit on the topic and a blind taste test. The event is an overwhelming success and the project will certainly be a highlight in Victor's portfolio for college applications.

Stakeholders Said

Many students and parents have asked for cooking and culinary arts courses. EPIC Test Kitchen! Learn about food production and different cultures. Hone your chef skills. Rally your classmates to start a campus coffee shop...

THE ~~END.~~ BEGINNING