



# **VANCOUVER iTECH PREPARATORY**

Vancouver, WA | Vancouver Public Schools | STEM Magnet School



# iTECH

## EXECUTIVE SUMMARY

Teamwork, playfulness, and a strong sense of community. These are the defining ideas that capture the Vancouver iTech Preparatory (iTech) experience. Students describe it as a place to experiment, to workshop their ideas with peers, and to follow their curiosity to the edge of the universe. Teachers describe iTech as a playground for innovation and a launching pad to exciting opportunities beyond school.

The iTech story is emblematic of the school's learning environment. In early 2017, Vancouver Public Schools (VPS) was presented with a dream scenario: the opportunity to re-home its middle and high school early college STEM programs together in a new building on-campus at Washington State University-Vancouver (WSU-V). To engage and nurture the talents and imaginations of extraordinary thinkers, the district wanted to develop an extraordinary environment. The design had to reflect what was truly unique about the school. And most importantly, the answer had to come from students and staff.

An in-depth pre-design program brought students, teachers, administrators, and university staff together to roll up their sleeves, discuss goals, and plan. What emerged from those initial meetings was a galvanizing idea that represents the iTech experience: Process on Display. The final result is a unique building that has been made to order for this STEM-focused, project-based learning program that empowers students to create and learn simultaneously while supporting the exploration of career pathways in an environment where they can make tangible connections to their immediate community.

### A Community of Learners

Embracing iTech's learning culture, the built environment emerges as a platform to connect with classmates on the workshop floor, tools in hand, sharpies ready. This progressive approach is reflected throughout the design and in the building's story. Open, bright, and transparent from end to end, the school embodies its response to conventional norms by offering students a place to connect with their community and gain as much value from the learning experience as they get from the content being taught to them.



iTech students gathering on Central Learning Stair



# ITECH

## SCOPE OF WORK & BUDGET

The project scope included the design and construction of a new 80,711 square foot school for students in grades 6-12. The program included a central learning stair, media and research center, cafe, biometrics/wellness center, a turfnasium, robotics labs, chemistry and biology labs, collaboration halls, outdoor learning spaces, 3D printer lab and project fabrication studios.

The final product is a three-story building that sits prominently on the Washington State University Vancouver (WSU-V) campus. Setting a new precedent for Washington's career-connected learning and education pathways goals, this location creates a natural connection between critical secondary and post-secondary education partners in Southwest Washington, providing students with the opportunity to gain exposure to college life, attend university courses, and engages with professors, mentors, and academic planning staff.

**PROJECT LOCATION:** 16100 NE 50th Ave, Vancouver, WA 98686

**OWNER:** Vancouver Public Schools

**SCHOOL DISTRICT:** Vancouver Public Schools, Battle Ground Public Schools

**CONSTRUCTION BUDGET:** \$35,618,000 (includes sales tax)

**COMPLETION DATE:** 2020

**PROJECT TYPE:** Institutional, K-12

**GRADES HOUSED:** 6-12

**STUDENT CAPACITY:** 700

**SIZE:** 80,711 SF

**STRUCTURAL SYSTEM:** Cross-Laminated Timber / Structural Steel Hybrid



Native plant species and a bioswale make the Main Entry a key space for learning and connection



SCHOOL & COMMUNITY ENGAGEMENT

A New Home for Vancouver’s Most Innovative Magnate Program

Vancouver Public Schools (VPS) initially created two early college STEM programs that operated from individual sites, serving the middle and high-school students separately. As the only program of its kind serving the VPS network, demand for enrollment was outgrowing the available space.

In 2017, a bond was passed that included funds to consolidate both schools at a new state-of-the-art building on site at the WSU-V campus. Given its strategic location, the new school would need to expand access to the Battle Ground School District, in addition to meeting the current and future needs of VPS’s middle and high school students.

To successfully merge these growing programs at this monumental location, district and university stakeholders, along with student representatives, gathered for a symposium. Their goal: create a shared vision for their school’s new home.

This critical pre-design session was leveraged to convene the widest and most diverse group of stakeholders possible to discuss their highest hopes and aspirations, most important needs and wish-list items. Moving forward, it was equally important that the design team build a presence within the iTech community, as future opportunities to gather feedback and input were created throughout the process.

Forming an Integrated Core Team

Following the symposium, a Core Team, consisting of VPS and WSU-V staff was assembled. This group met regularly throughout the design and construction process. These ongoing meetings provided consistent opportunities to discuss ongoing issues or matters related to the design, ensuring continuous and measurable progress was made. This also provided a reliable platform and flow of information to keep stakeholders

up-to-date on the project as it made its way through development.

The leadership of this Core Team was critical to ushering the project through the design and construction process, and also ensured the facility’s successful and welcoming opening to its students and staff. The relationship that formed between iTech’s staff and WSU-V became an important part of how the design was developed to serve the unique needs of the program.

Through a comprehensive exploration of culture and values, the design team established a series of attributes that would help tell the story of iTech in built form. Across the school, examples of these attributes show various ways the design supported the school’s vision:

- Strong presence of biophilia and a connection to nature
- Variety and flexibility of spaces
- Integration of nature and physical education
- Bridges/Transparency
- Collaboration
- “Design Process” on display

Challenges

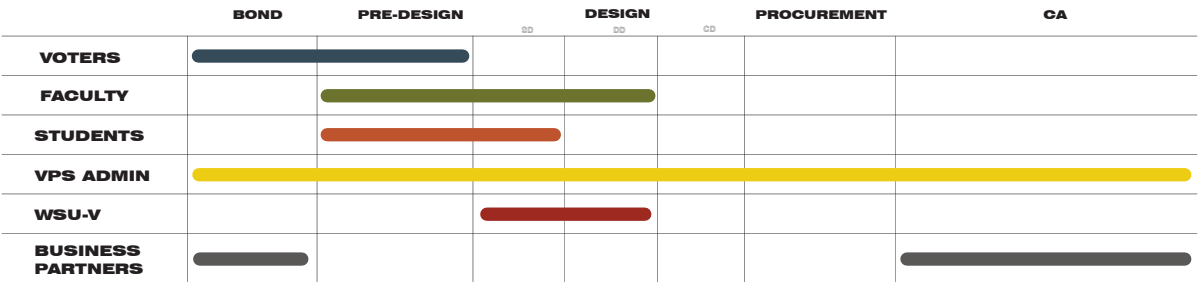
Designing a building that shared its home with a university campus meant conforming to specific design standards, while also providing for the unique needs of the program itself. The main challenges to this process included:

- Creating a safe environment for a consolidated community of learners
- Gathering and analyzing input from a large and diverse stakeholder group
- Delivering an innovative, highly-creative program within a limited budget
- Adhering to WSU-V design standards



I applied to iTech five years ago before we were in the new building. I chose to attend because I was drawn to the unique opportunities brought by project-based learning. What really kept me at iTech was the tight knit, small, and supportive community.

- iTech Student



TOP: Community gathering on Central Learning Stair BOTTOM: Involvement Schedule for iTech Stakeholders





# iTECH

## SCHOOL & COMMUNITY ENGAGEMENT

The programs that would ultimately become iTech originated in more traditional K-12 buildings across our community, presenting an exciting opportunity for the district to adapt what had worked in the past while exploring innovation through a ground-up design process. Part of the challenge in merging the middle and high school STEM programs at a new shared location was identifying and planning a completely purpose-built school that offered the spaces, infrastructure, and vision to elevate this relatively young program into a highly functional and inspiring destination for students who learn by doing, making, and creating.

### Integration of Physical Education

With a future-ready approach to its physical education curriculum, iTech provides students with a program centered on holistic health and wellness including biomechanics, physiology, nutrition, and alternate sports. To facilitate this diverse curriculum, the faculty and students required a physical

education space to function differently from a standard gymnasium. The design team looked for ways to create natural movement between spaces and offer breaks in the day in the day that nurture students and provide a mental respite supporting focus, energy, and balance. To invite students to a place where it would be fun to socialize, kick a ball around, and take a breather between classes. With this in mind, one of the school's signature features is the "turfnasium," a reimagined gymnasium space that offers textures, views, and a surface that feels like being outside, intentionally blurring the traditional lines between indoor and outdoor spaces

LEFT: View of Central Learning Stair & Entry Bridge  
BOTTOM: Views into Turfnasium & Classrooms





## SCHOOL & COMMUNITY ENGAGEMENT

iTech's location on the WSU-V campus creates a visual, metaphorical and literal bridge between the two institutions. This relationship to the university is an important part of the learning experience at iTech. The site has several major advantages that can be understood in the following ways:

### Supporting the district's vision:

The high school and middle school were previously located on opposite sides of Vancouver. The new shared site on WSU-V campus is a boon to the district's vision for one iTech school and brings both student groups together within 1.2 miles of WSU-V's front door.

### Promoting growth and community partnerships:

The school's strategic location supports long-term student attainment, career exposure and unique educational experiences.

### Creating a new district:

The selected site, located at the eastern edge of the WSU-V campus, was widely undeveloped. Satellite imaging showed a remaining linear grove of trees (formed from a series of creeks, lowlands) providing a natural barrier that has impacted development patterns of the city. The design team recognized the importance of setting a high standard for large scale development that passed this natural barrier - essentially setting up a new "district."

### Natural views:

The site benefits from excellent views of mountains, proximity to an existing grove of mature trees, and numerous vistas provided by what used to be multigenerational agricultural farm.

### Access to Higher-Education

Beginning in their freshman year, iTech students have the opportunity to attend college classes, allowing them to engage with

mentors, professors, and advisors without having to break entirely from their daily routine.

Additionally, professors from the university offer guest lectures at iTech and students have numerous opportunities to audit university courses and experience laboratories and other technical learning environments unique to a college campus. The campus itself attracts guest speakers and industry professionals who can expose students to innovative developments in a variety of sectors, furthering their education in a way that extends well beyond the traditional classroom. From a mission standpoint, this also serves the students by creating an environment where students can benefit from the opportunity to build relationships and envision a strong future for themselves in both their educational and professional careers. The result is that iTech becomes a learning environment that prepares students for college in a very tangible way.

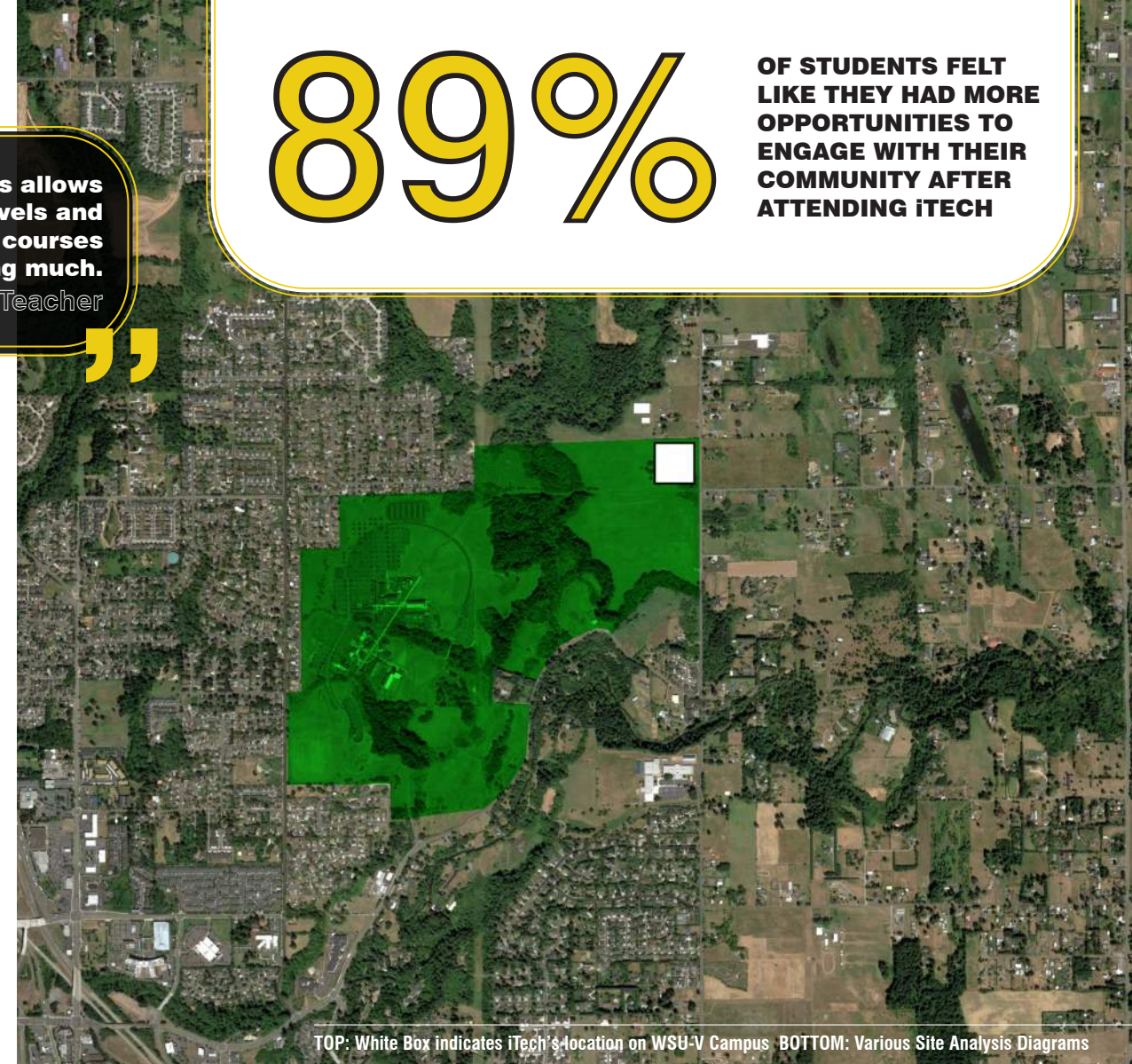
### A Vibrant Design Process

Given the popularity of the early college STEM program and the school's new site, iTech had the support and energy of a highly engaged school community. This included a staff of passionate teachers and students (and their families) who were thrilled to move into a purpose-built facility that would be designed according to their unique needs. Their commitment to creating the most innovative education environment in the State of Washington allowed for a vibrant design process that was true to the goals of the district. Staff, teachers and administrators were fully engaged, pushing for educational innovation around robotics, digital and physical fabrication, chemistry and biology, biometrics and nutrition.

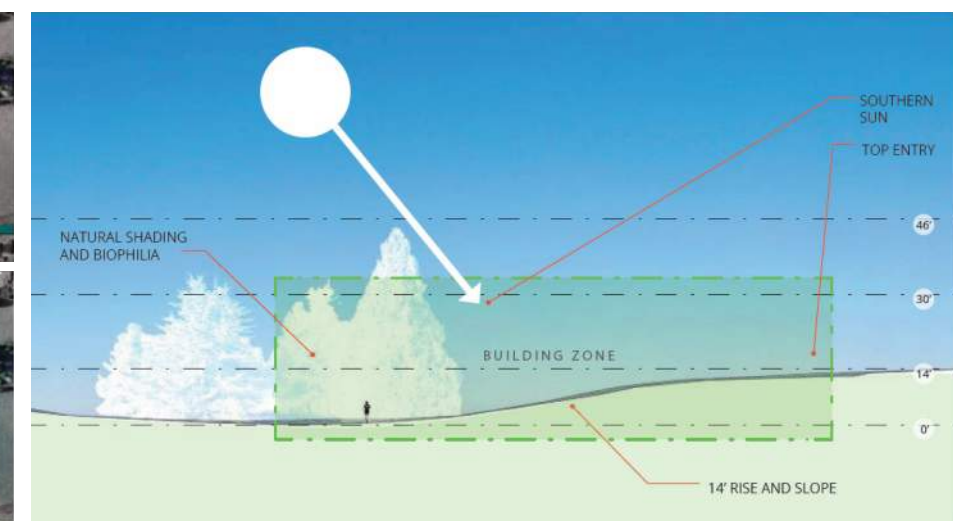
“The fact that we're on WSU-V campus allows students to go beyond at higher levels and fairly easily come back and do iTech courses and learning without missing much.”  
- iTech Teacher

# 89%

OF STUDENTS FELT LIKE THEY HAD MORE OPPORTUNITIES TO ENGAGE WITH THEIR COMMUNITY AFTER ATTENDING iTech



TOP: White Box indicates iTech's location on WSU-V Campus. BOTTOM: Various Site Analysis Diagrams





# iTECH

## SCHOOL & COMMUNITY ENGAGEMENT

### Value of Project to Larger Community

#### Symposium

As a tax-payer funded project, the district's first priority was honoring the public's investment in the future of iTech. This pre-design symposium process was orchestrated to bring all stakeholders to the table for discussions that would highlight important needs, make space for perspectives and views, and build consensus amongst this large, diverse group.

#### Fueling the Local Innovation Economy

iTech's curriculum, facilities and position on WSU-V campus create an innovative environment for students to network and develop future-focused interpersonal and professional skills. At the same time, these conditions are also ideal for partnerships to flourish with the local business community. Promoting and nurturing these connections is one of the district's key goals, with the hope of creating career-connected opportunities for students that extend beyond the building. iTech's calendar of events is punctuated by guest speakers and workshops. Consequently, the range of frequent, visible and dynamic opportunities for students and the professional community to engage with one another will raise the number of graduates entering the workforce with first-hand experience in a field of their choice. As a key component of Clark County's comprehensive economic development plan, iTech represents a concerted effort to invest in a locally-sourced workforce of professionals who have grown up in the community.

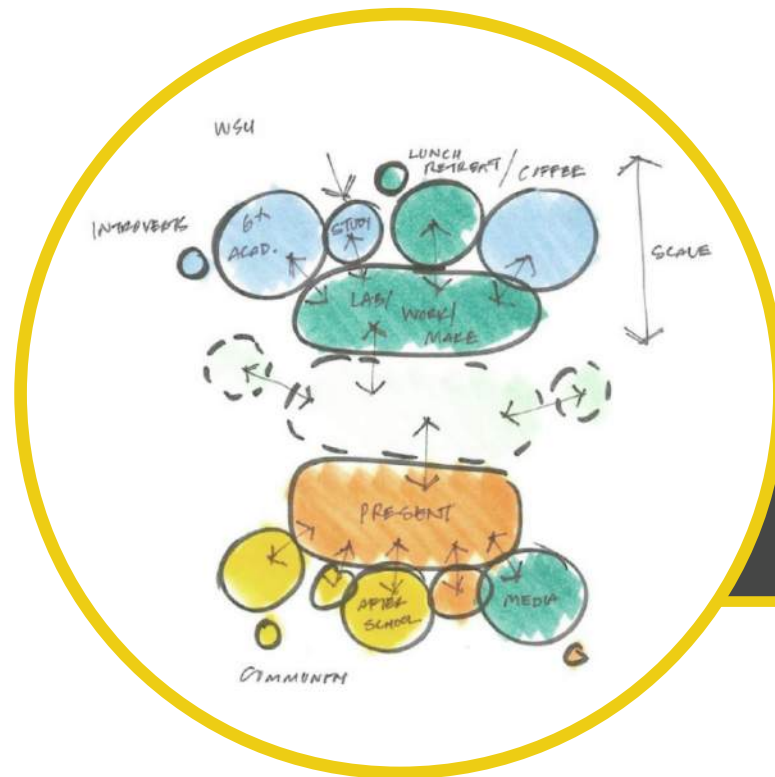
PHOTO: Core Team Activities Discussion

**It facilitates collaboration and project based learning beyond what I could have hoped for. In going through the visioning process for the building with the core team, we were challenged to identify what we stood for and who we were. The building is the embodiment of who we are as a learning community and supports our program perfectly.**

- iTech Administrator

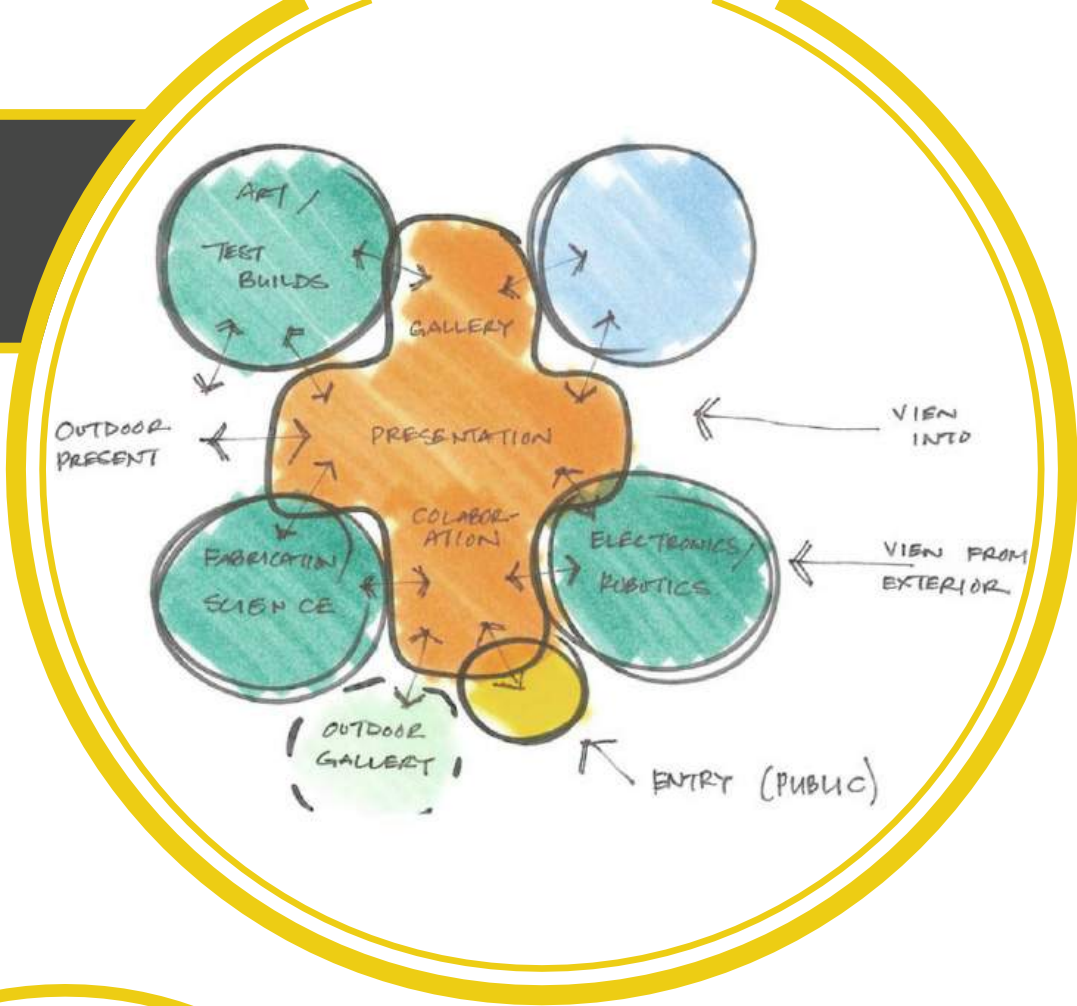






**COLLABORATION COMMONS**  
Instruction and presentation areas spill out into a large central collaboration area

**PROCESS ON DISPLAY**  
Student learning, instruction and projects are highly visible and celebrated throughout the entire school



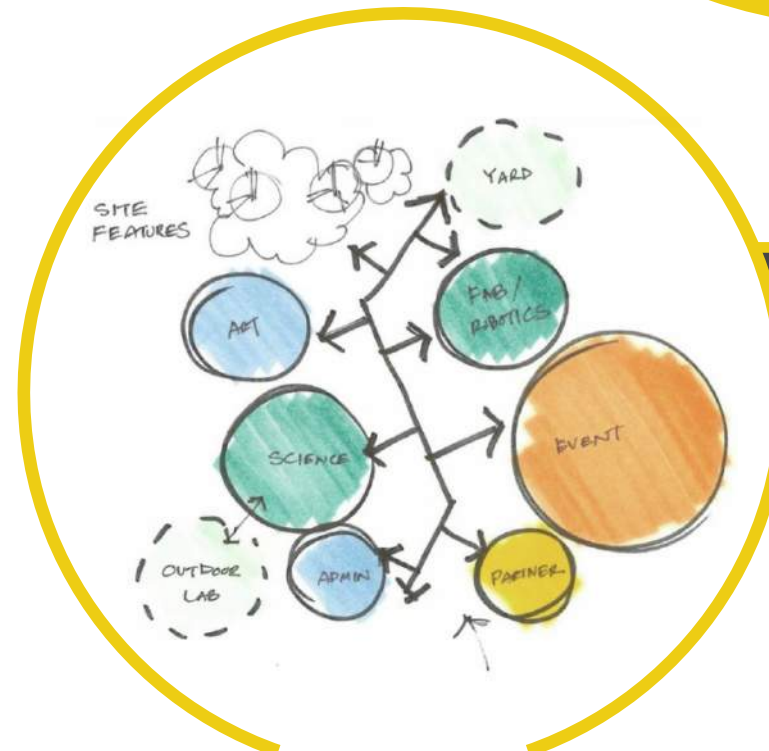
## SCHOOL & COMMUNITY ENGAGEMENT

### Discovering Process on Display

The involvement of this Core Team was critical to ushering the project through its design and construction process. It was during these meetings that the design team presented three concepts that could encapsulate the school's central value. These concepts are represented by the illustrations on this page:

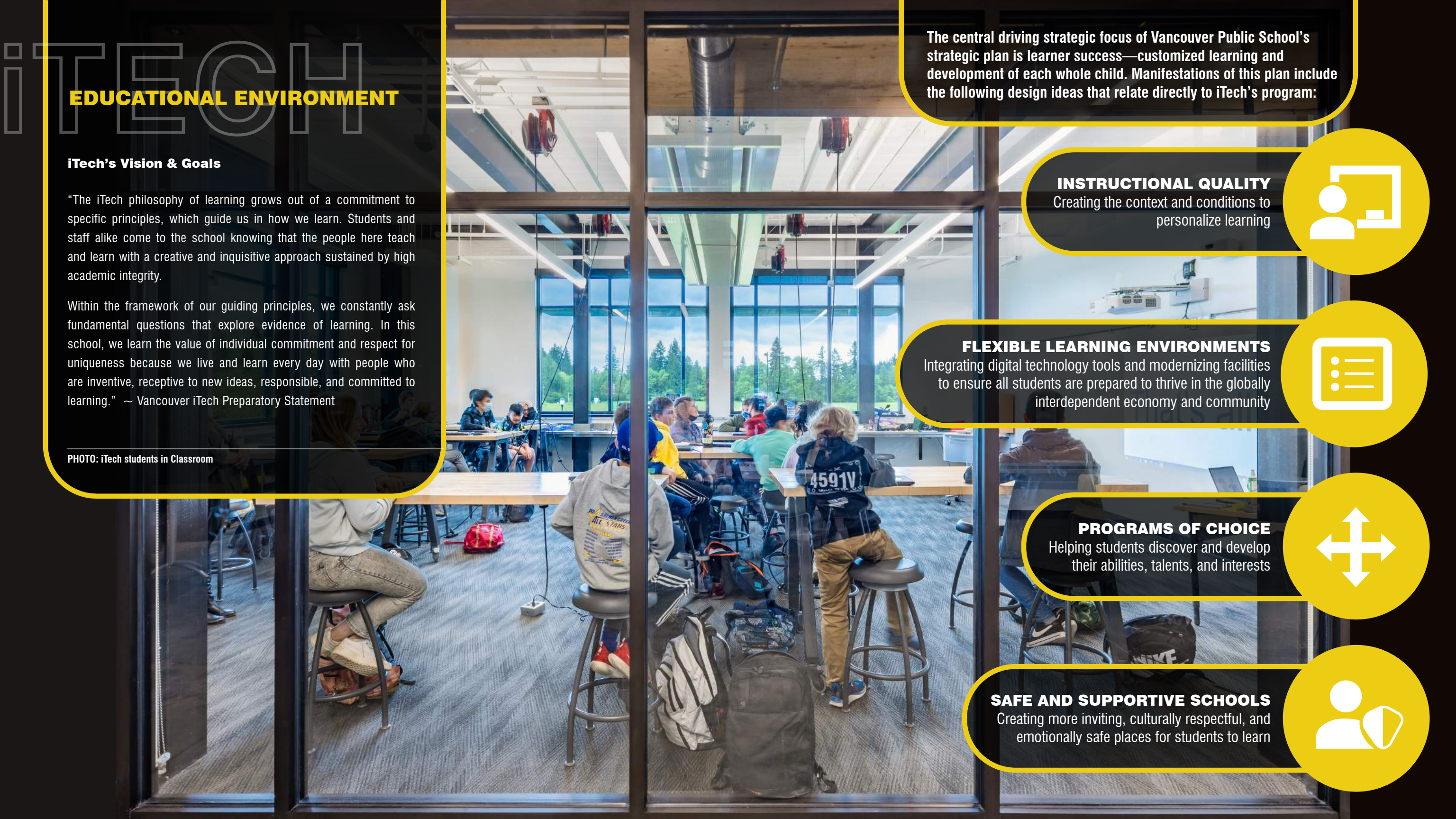
- Maker Yard
- Collaboration Commons
- Process on Display

While each of these concepts spoke to values or ideas that are important to the project, "Process on Display" created an aha moment for the Core Team and unlocked what was truly critical to iTech's learning culture and home.



**MAKER YARD**  
An outdoor Maker Yard connects programmatic elements





# iTECH

## EDUCATIONAL ENVIRONMENT

### iTech's Vision & Goals

"The iTech philosophy of learning grows out of a commitment to specific principles, which guide us in how we learn. Students and staff alike come to the school knowing that the people here teach and learn with a creative and inquisitive approach sustained by high academic integrity.

Within the framework of our guiding principles, we constantly ask fundamental questions that explore evidence of learning. In this school, we learn the value of individual commitment and respect for uniqueness because we live and learn every day with people who are inventive, receptive to new ideas, responsible, and committed to learning." ~ Vancouver iTech Preparatory Statement

PHOTO: iTech students in Classroom

The central driving strategic focus of Vancouver Public School's strategic plan is learner success—customized learning and development of each whole child. Manifestations of this plan include the following design ideas that relate directly to iTech's program:

### INSTRUCTIONAL QUALITY

Creating the context and conditions to personalize learning



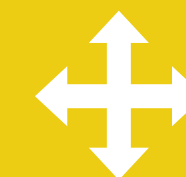
### FLEXIBLE LEARNING ENVIRONMENTS

Integrating digital technology tools and modernizing facilities to ensure all students are prepared to thrive in the globally interdependent economy and community



### PROGRAMS OF CHOICE

Helping students discover and develop their abilities, talents, and interests

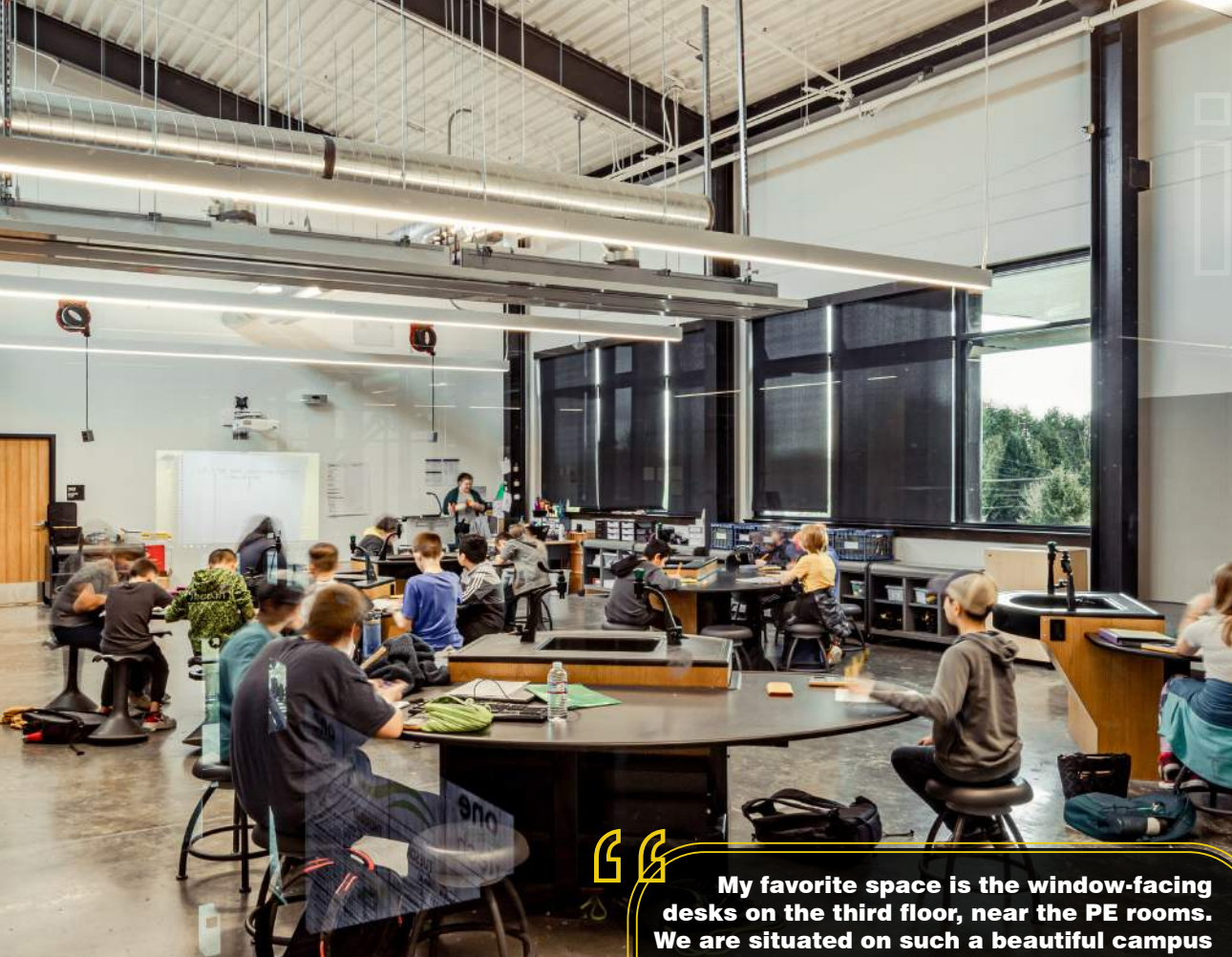


### SAFE AND SUPPORTIVE SCHOOLS

Creating more inviting, culturally respectful, and emotionally safe places for students to learn







“My favorite space is the window-facing desks on the third floor, near the PE rooms. We are situated on such a beautiful campus and I think those seats offer a really nice view of both nature and traffic that is great to have while studying.”

- iTech Student



## EDUCATIONAL ENVIRONMENT

### Supporting Project-Based Curriculum

iTech's project-based approach to learning integrates technology, teaching methods, and collaboration into the learning experience. This is further expressed and facilitated by a variety of spaces and interior elements that encourage students to gather, work alongside one another, and create their own working communities at school. This supports the development of core skills such as communication, teamwork, and problem-solving. Within the parameters of a highly inclusive and welcoming educational environment, teachers play a hands-on role in helping students strategize and build solutions to real-world problems they'll face and solve outside the school environment.

### Interconnectivity of Curriculum

iTech's approach is supported by classrooms that connect through a grand central area for presentation and events, showcasing students' work and organically supporting peer-to-peer collaboration. This goes to the root of iTech's central theme, "process on display."

Adjacent and visible from this core are fabrication spaces flanked by flexible collaboration halls. These collaboration halls are arranged both horizontally and vertically to allow variety, transparency and views to the classrooms and labs, the outdoors and to adjacent floor levels. This is strongly connected to iTech's vision of a connected educational experience, where students are learning individually and from one another in an open setting (i.e. Process on Display).

### A Variety of Spaces to Support Different Ways of Learning

iTech has a variety of sizes and qualities to spaces that support different learning preferences and/or project types. The goal of these diverse is to

maximize options for all students and teachers, allowing the environment to be used and personalized in ways that best support the needs of learners.

- Collaboration halls and flexible learning rooms are located in a variety of strategic locations around the building, varying in size. Some deeper in the building, while others are on the periphery with ample natural lighting, supporting organic interactions between student peers, staff and administration.
- The collaboration halls provide spaces outside classrooms where project work can flow into the hall as needed.
- Window glazing provides safety in addition to acoustic isolation as needed, while maintaining visibility and flexibility between spaces.
- The classrooms, labs and cafe can be used by students throughout the day when unoccupied, giving students the freedom to "make their own space."

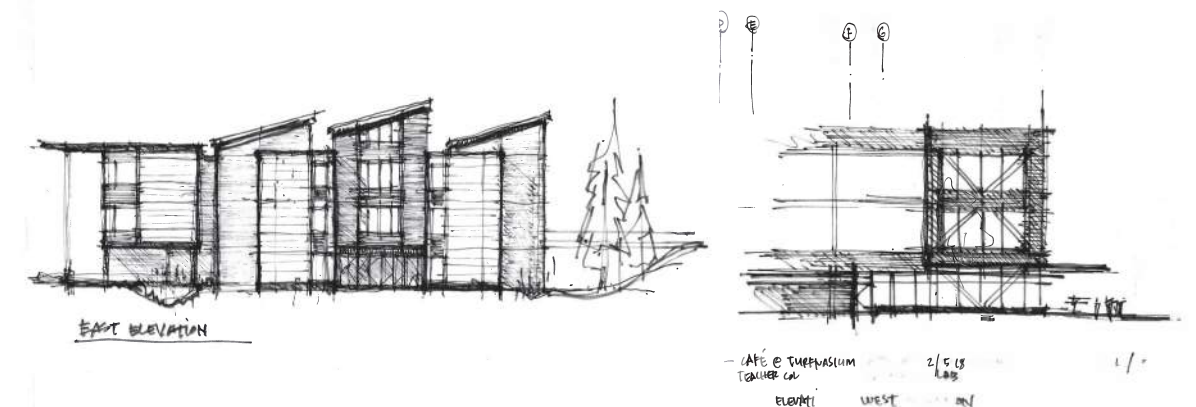
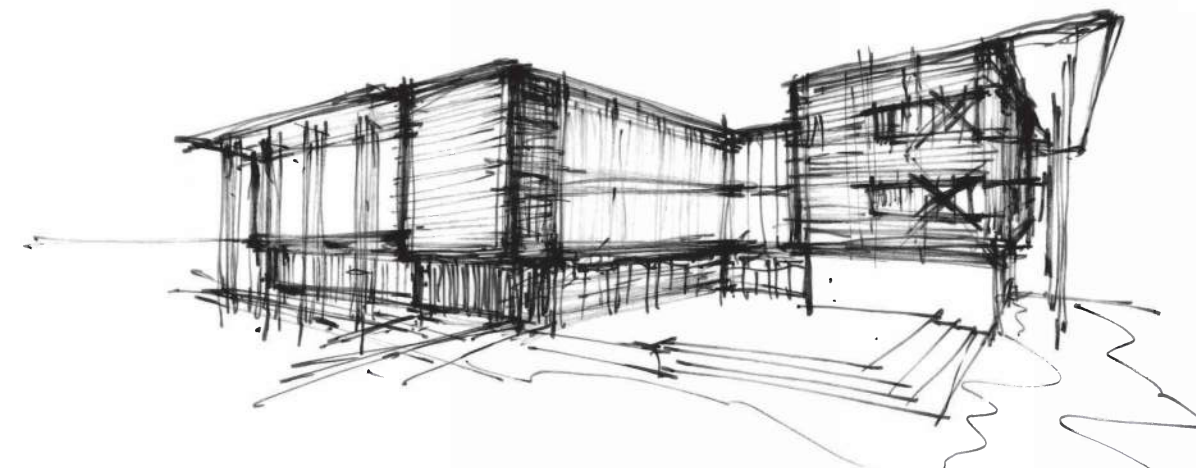
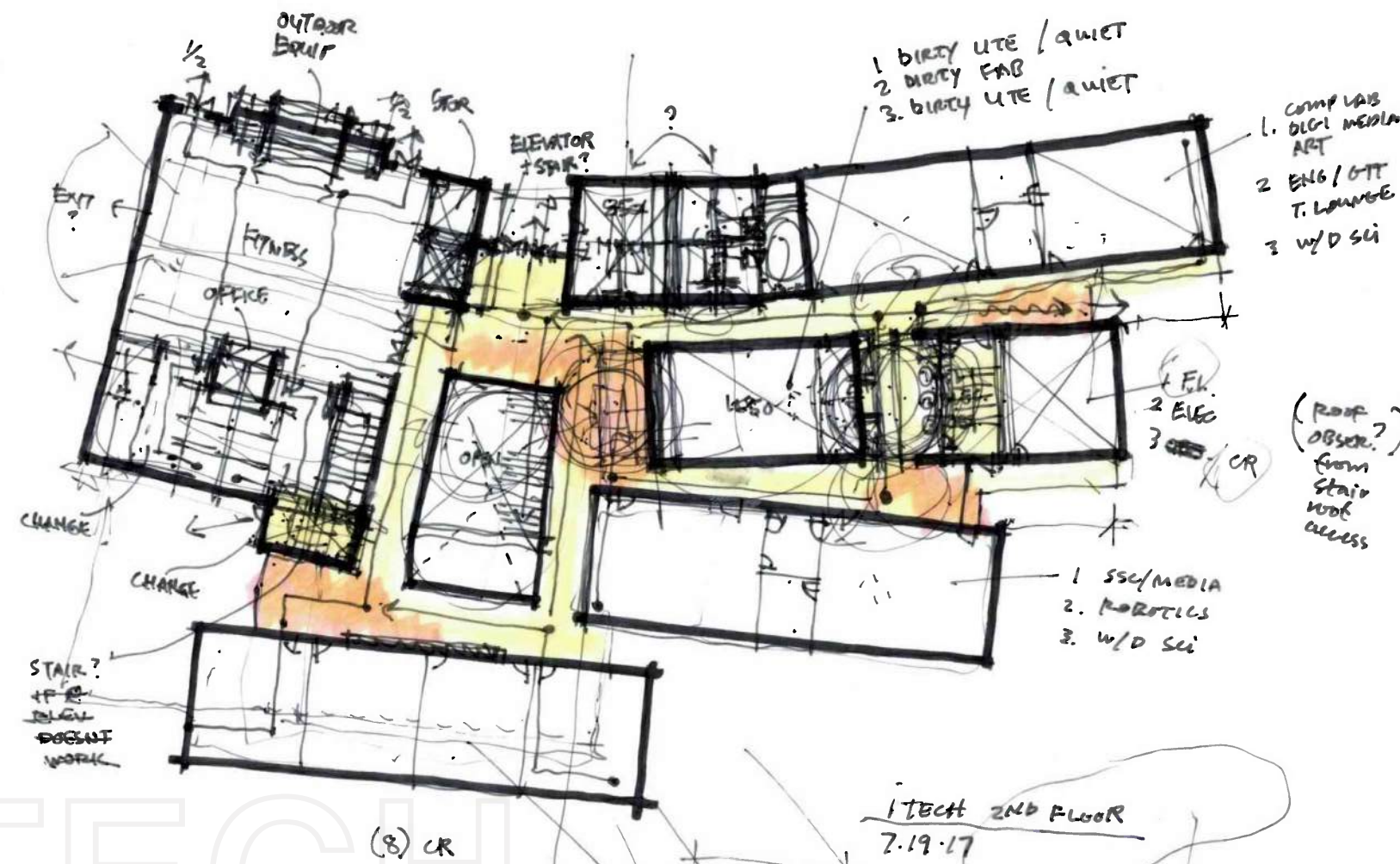
LEFT: Views into classroom and collaboration area in the hallway

On a scale of 1-5, how well does the school promote collaboration?

100% Teachers

79% Students

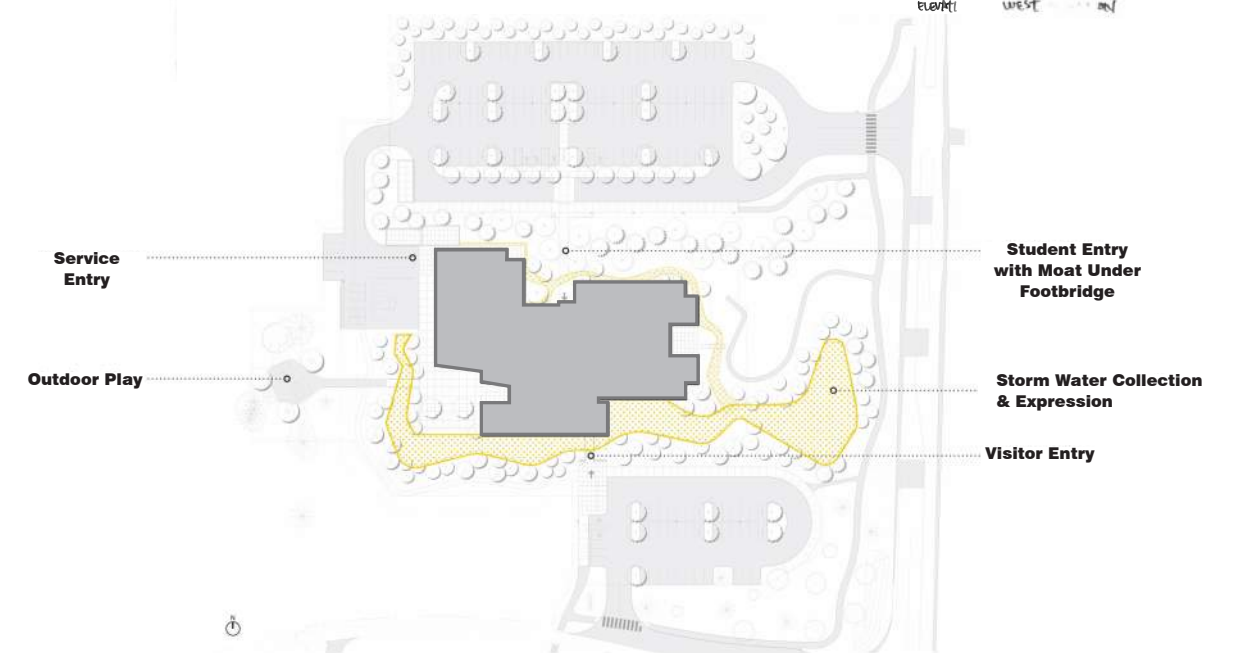




## EDUCATIONAL ENVIRONMENT

In order to serve the school's collaborative and open style of teaching, there are multiple spaces and labs to support the diverse learning styles and needs of iTech's students. These purpose-built "classrooms" are used for specific lessons or workshops, yet they can be easily opened up to sounds of peers gathering on the learning staircase in the center of the school. This connects with the overarching theme of collaboration and community, reinforcing the idea that students are a foundational part of the greater whole.

For example, fabrication spaces are adjacent to and visible from the school's central gathering spot, and these are flanked by flexible collaboration halls that can easily be repurposed to suit the needs of students and teachers. This connects back to the core design values of students embracing an inter-connected curriculum of projects, composed of multiple ideas and disciplines. The school spaces are as flexible and open as the students need them to be, in order to build their own solutions.



TOP: Design Team preliminary sketches  
BOTTOM: Site Plan



# iTECH

## EDUCATIONAL ENVIRONMENT

### Connections

Foundational to iTech's innovative learning environment is the natural integration of physical and spatial elements that promote wellness, movement and mental health. Throughout the school, there is a strong sense of connection between key components: students to one another, mental and physical health, and to the land itself. Through an abundance of natural light and wide-spread views to the outside world, the lines between learning and play are blurred.

This has the dual effect of making students feel like they're a part of nature and not in a typical classroom environment. In the Pacific Northwest, where sunshine is a rare commodity during winter months, the presence of natural light offers a mental and physiological benefit by giving students and staff a stronger connection to the outside world.



...I like that there are a lot of spaces for various learning needs. We have access to a variety of resources that makes most project ideas possible. Want to use the kiln to melt certain elements for a chemistry project? Want to use a laser cutter to make bricks for an NHD exhibit? Want to go outside to have more space? Especially as high school students, we have a lot more freedom to use these spaces.

-iTech Student



RIGHT: Large windows and sliding doors bring natural daylight into the classrooms and offer a strong connection to the outdoors  
BELOW: Project floor plans

### FLOOR 1

- 1 GATHERING/PRESENTATION
- 2 CAFE
- 3 ENTRY/CIRCULATION
- 4 ADMINISTRATION/STAFF
- 5 COUNSELING/CAREER
- 6 MEDIA/RESEARCH
- 7 ART
- 8 DIGITAL MEDIA ARTS
- 9 COMPUTER LAB
- 10 CLASSROOM
- 11 COLLABORATION/FLEXIBLE LEARNING
- 12 RESTROOM/SERVICE
- 13 ROBOTICS/ENGINEERING
- 14 FABRICATION/PROJECT SPACE
- 15 FITNESS
- 16 CHANGING FACILITIES
- 17 BIOMETRICS/Wellness
- 18 SCIENCES
- 19 KITCHEN
- 20 LEARNING STAIR



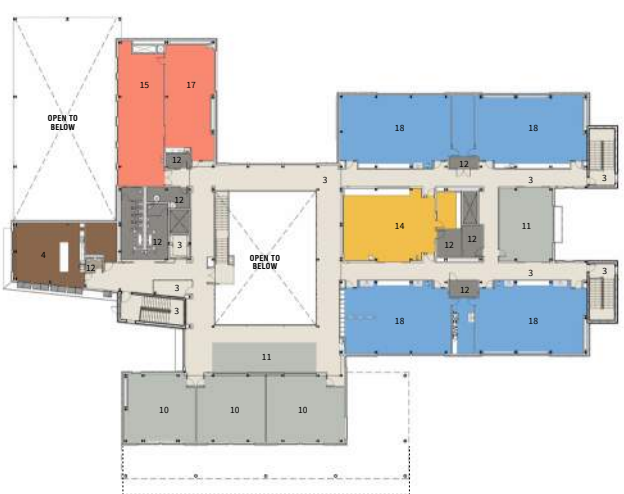
### FLOOR 2

- 1 GATHERING/PRESENTATION
- 2 CAFE
- 3 ENTRY/CIRCULATION
- 4 ADMINISTRATION/STAFF
- 5 COUNSELING/CAREER
- 6 MEDIA/RESEARCH
- 7 ART
- 8 DIGITAL MEDIA ARTS
- 9 COMPUTER LAB
- 10 CLASSROOM
- 11 COLLABORATION/FLEXIBLE LEARNING
- 12 RESTROOM/SERVICE
- 13 ROBOTICS/ENGINEERING
- 14 FABRICATION/PROJECT SPACE
- 15 FITNESS
- 16 CHANGING FACILITIES
- 17 BIOMETRICS/Wellness
- 18 SCIENCES
- 19 KITCHEN
- 20 LEARNING STAIR



### FLOOR 3

- 1 GATHERING/PRESENTATION
- 2 CAFE
- 3 ENTRY/CIRCULATION
- 4 ADMINISTRATION/STAFF
- 5 COUNSELING/CAREER
- 6 MEDIA/RESEARCH
- 7 ART
- 8 DIGITAL MEDIA ARTS
- 9 COMPUTER LAB
- 10 CLASSROOM
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- 18 SCIENCES
- 19 KITCHEN
- 20 LEARNING STAIR





# TECH

## EDUCATIONAL ENVIRONMENT

### Context of Community

To help ensure that iTech's enrollment reflects the diverse and widespread demographics of VPS as an entire district, a lottery process with a designated number of slots for each zip code has been implemented. Ten percent of iTech's enrollment is reserved for students in Battle Ground Public Schools, because the WSU-V/iTech campus is located within that district.

### A Network of Support

iTech students and staff are supported by a strong network of advocates, allies, and champions who are united behind VPS's commitment to promoting equity and inclusion by offering services that meet the unique and individual needs of students. The services range from housing support to LGBTQ+, crisis management and food assistance, all of which are fully accessible to students at iTech.

Services are offered to students from a more private location below the learning stair, where students can access support from a separate entrance that maintains a critical sense of welcoming, privacy and safety all at once. Views to the natural landscape around the school create a more open atmosphere, drawing from the mental and emotional benefits associated with biophilic design and a direct connection to the outdoors.

PHOTO: View out of the Counseling Center below the Learning Stair







On a scale of 1-5, how well does the building offer natural daylight?

100%

Teachers



87%

Students



**Having the WSU-V field, pathway, and trail system has been a great space for hiking, running, and biking (VPS Bike Unit). The local creek and our building's moat has offered perfect real-world studies for our science department.**

- iTech Teacher



# iTECH

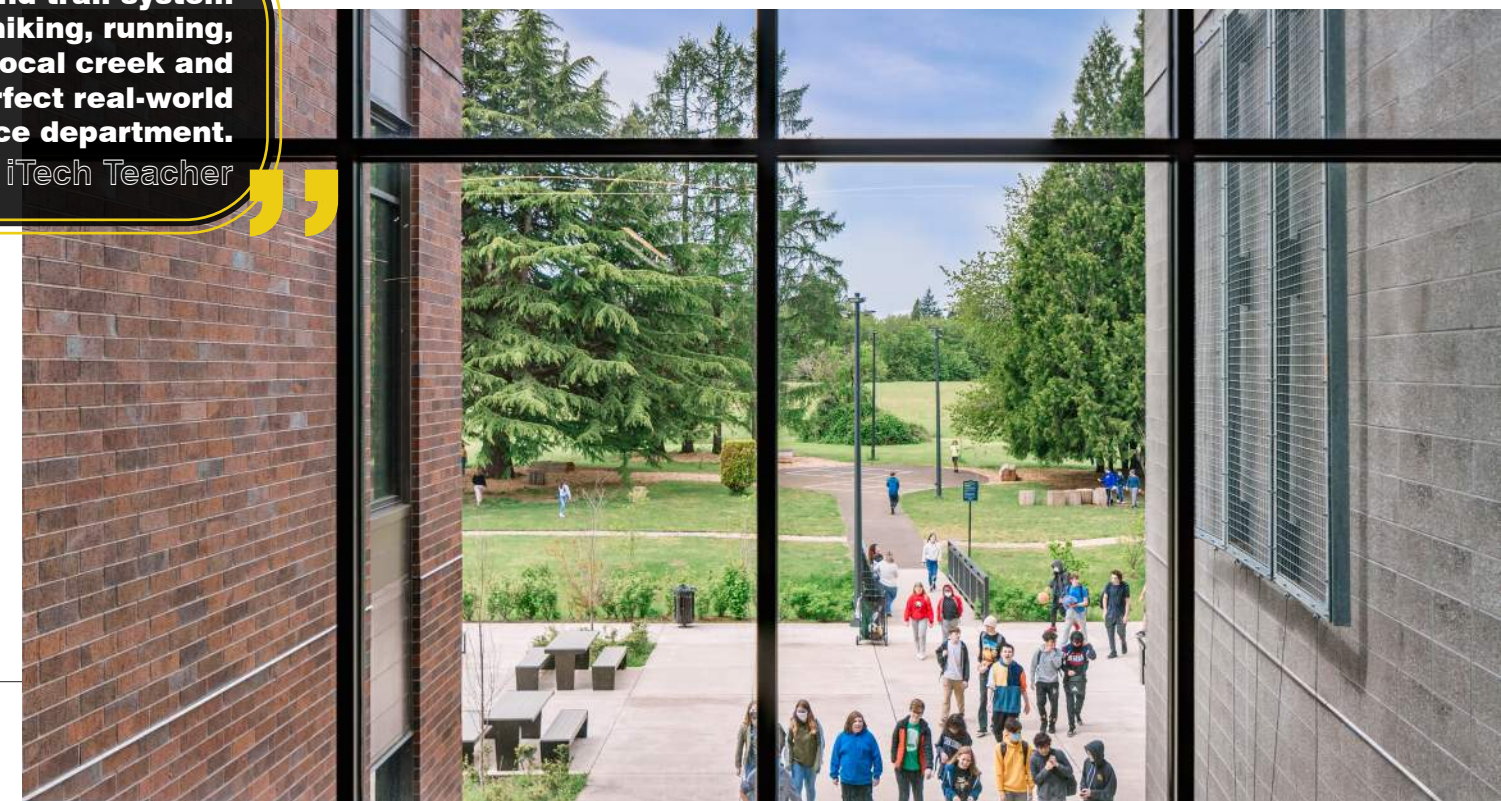
## PHYSICAL ENVIRONMENT

### Physical Attributes

All across the site, there are highly intentional and organic connection points between the existing landscape and the built environment. The sense of connection at iTech extends beyond the walls of the building, which takes its shape and aesthetic from the surrounding topography and foliage, harmonizing its interior elements with the natural elements outside.

The hillside location for iTech's new campus included an array of natural elements that were enhanced and preserved through construction. This includes views of the rolling meadow landscape by locating parking behind the building and away from key vistas to the southwest and to the existing grove of mature trees – which offer students a prime location to relax and take shade on warm days between classes.

TOP: The Entry Bridge rises above the Moat & view of school from the surrounding landscape  
 BOTTOM: iTech students arriving to the school







## PHYSICAL ENVIRONMENT

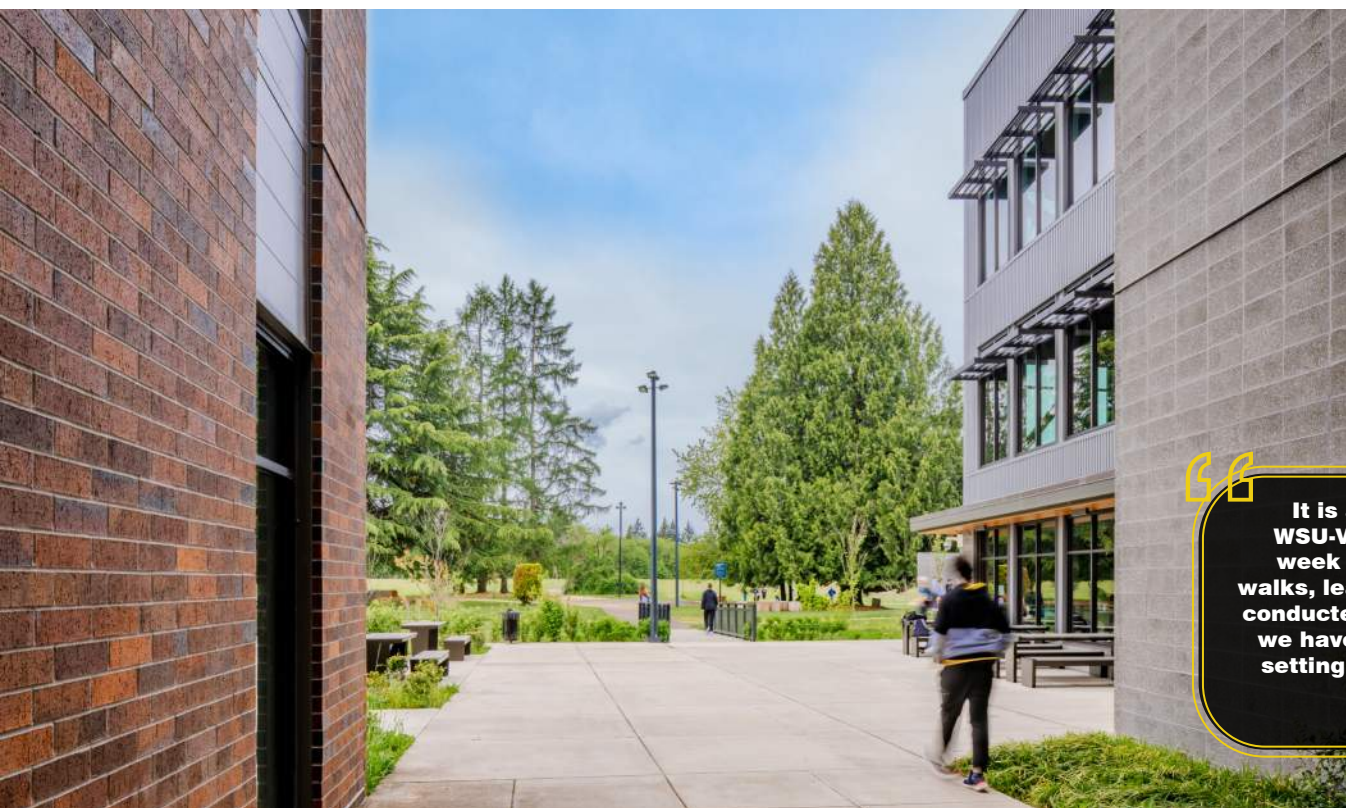
### Site Plan

- The public face of the building emerges from a new wetland environment that captures and cleanses all water from the parking lots, roof, and the adjacent landscape.
- Public parking is moved away from view and carefully nestled behind the existing trees near the entrance to the WSU-V campus. Student and faculty parking as well as bus drop off are located behind the building and screened from primary view corridors from the building. Footbridges allow gracious and engaging access to and from the building, surrounded by natural environment.
- Light and movement extend through the building into the landscape. To the east is the maker space and courtyard. The courtyard can be used as a learning laboratory for testing ideas, fabrication, mock-ups, and is surrounded by garden terraces for research and education. To the west is the primary outdoor gathering space that spills out from the cafe and central commons. The courtyard rests above, and steps down, to the storm water wetlands with a series of south facing terraces. Movable café tables and chairs allow the courtyard to be flexible for different uses and events.
- Aligned with the central commons, a footbridge crosses the wetland and terminates at the existing mature grove of large trees. Central to the space is a simple paved area to be used for activities such as half-court basketball,

4-square, or other hard surface games. The space can also be used for outdoor work sessions and activities, with breakout spaces provided by the large trees. The trees will be groomed and their canopies raised for visibility and access. Soft surface paving of wood chips and mulch protect the roots and allow access under the trees by students. Simple logs or log rounds are the natural tables and chairs.

### Landscape Typologies

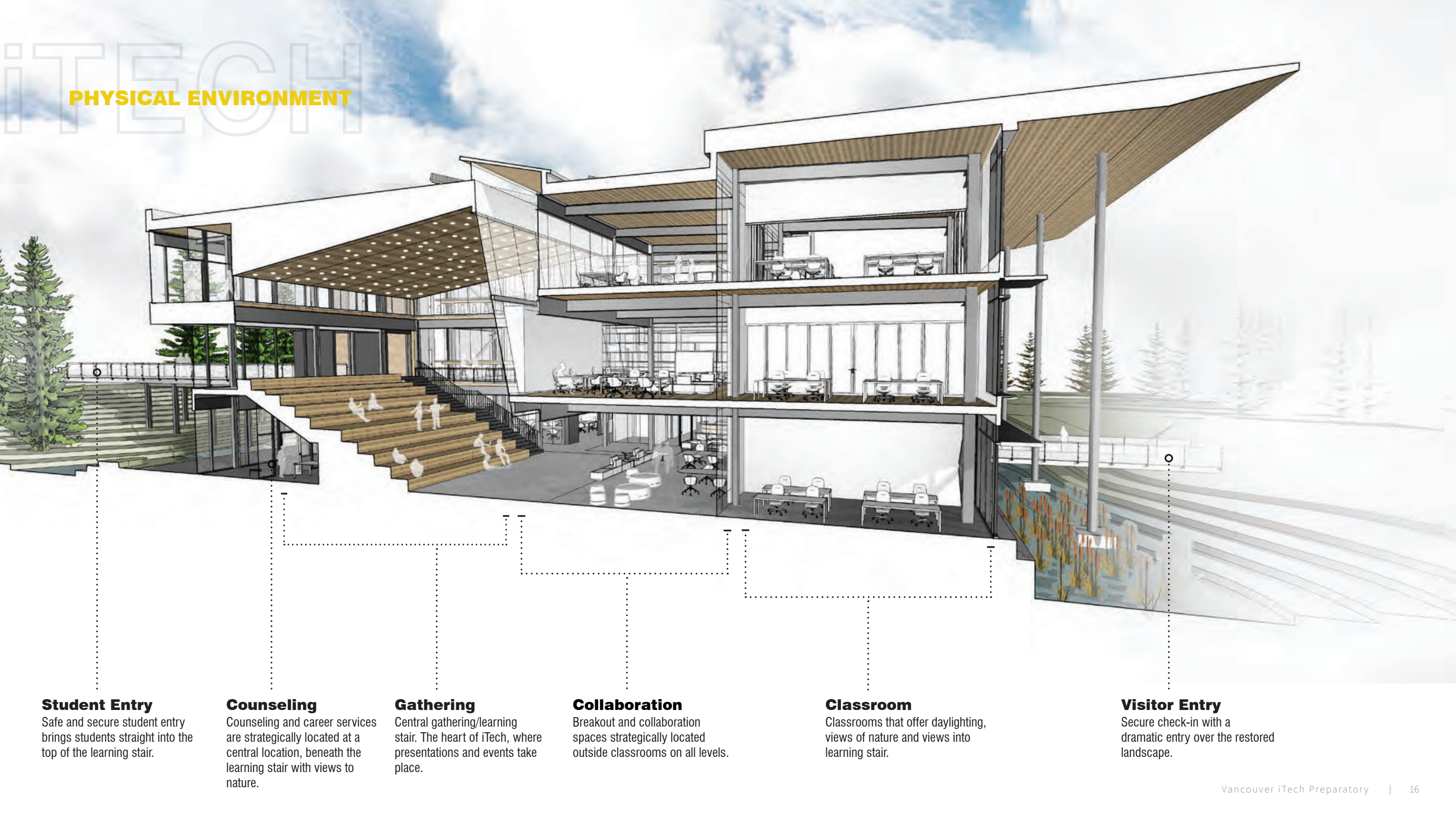
- Views of the rolling meadow landscape are preserved by locating parking behind the building and away from key vistas to the southwest and to the existing grove of mature trees mitigating the impact of hardscape in a sensitive ecological setting.
- The existing low swale that runs across the site is enhanced as a native stream bed landscape.
- Existing groves of trees are protected including the large mature trees that appear to be a remnant from the original farmhouse of a previous land owner.
- The facility is screened from view with native trees and gently rolling earth berms reminiscent of the existing landscape.



**It is an amazing setting and allows us access to not only WSU-V but also numerous learning opportunities. Just this week students have taken photos outside, gone on nature walks, learned math through using surveying equipment, and conducted science experiment all in the outdoor spaces that we have access to. This is anecdotal but I also feel that the setting produces a calming effect that makes students feel more comfortable to learn.**

**- iTech Administrator**





# iTECH

## PHYSICAL ENVIRONMENT

### Student Entry

Safe and secure student entry brings students straight into the top of the learning stair.

### Counseling

Counseling and career services are strategically located at a central location, beneath the learning stair with views to nature.

### Gathering

Central gathering/learning stair. The heart of iTech, where presentations and events take place.

### Collaboration

Breakout and collaboration spaces strategically located outside classrooms on all levels.

### Classroom

Classrooms that offer daylighting, views of nature and views into learning stair.

### Visitor Entry

Secure check-in with a dramatic entry over the restored landscape.





# iTECH

## PHYSICAL ENVIRONMENT

### Inspires and Motivates

Much of the project work at iTech is done in an open setting, showcasing processes behind student learning styles in real-time with no barriers to visibility. The facility is designed to encourage collaboration among students and teachers across grade levels and disciplines. One of the great byproducts of this environment is the peer-to-peer inspiration that happens when students are free to share their work, learn from one another, and build each other up.

The result is a fun and vibrant environment that lends itself to open dialogue. The building's design further accentuates this open mode of operation by centering the labs, collaboration spaces, and workshops around the gathering and presentation stair. This stair acts as a central point to showcase iTech's unique curriculum while allowing the school to function as a true community. The school is well suited and equipped to host speakers and presenters. This adds a new and exciting layer to the experience of learning, which exposes students to big ideas, innovations and translational thinking of academic principles into the real world.



**I don't really have a favorite space because the entire building is my favorite space. The design simply works. It exceeds all the expectations that the project vision set out to do. To create a school that showcased collaboration, facilitated and promoted opportunity for project base enriched learning, making learning exciting and fun. An environment where student work is displayed, teamwork is encouraged as part of the learning process through project based learning and the ability to create and experiment and ask questions that all tie together to the STEM focus program of iTech. It further reinforces that commitment to further education regardless of future plans for college or potential trade school that students might have long term.**

**- iTech Administrator**



# iTECH

## PHYSICAL ENVIRONMENT

The learning staircase rests at the very heart of the school, functioning as a terminal and highly visible central location that students can use to gather, collaborate, or congregate during larger presentations. No matter where you sit, there's a clear view of the teleprompter, giving students who prefer to sit further back the same level of information as those who prefer to be upfront where they can ask questions and be more involved.

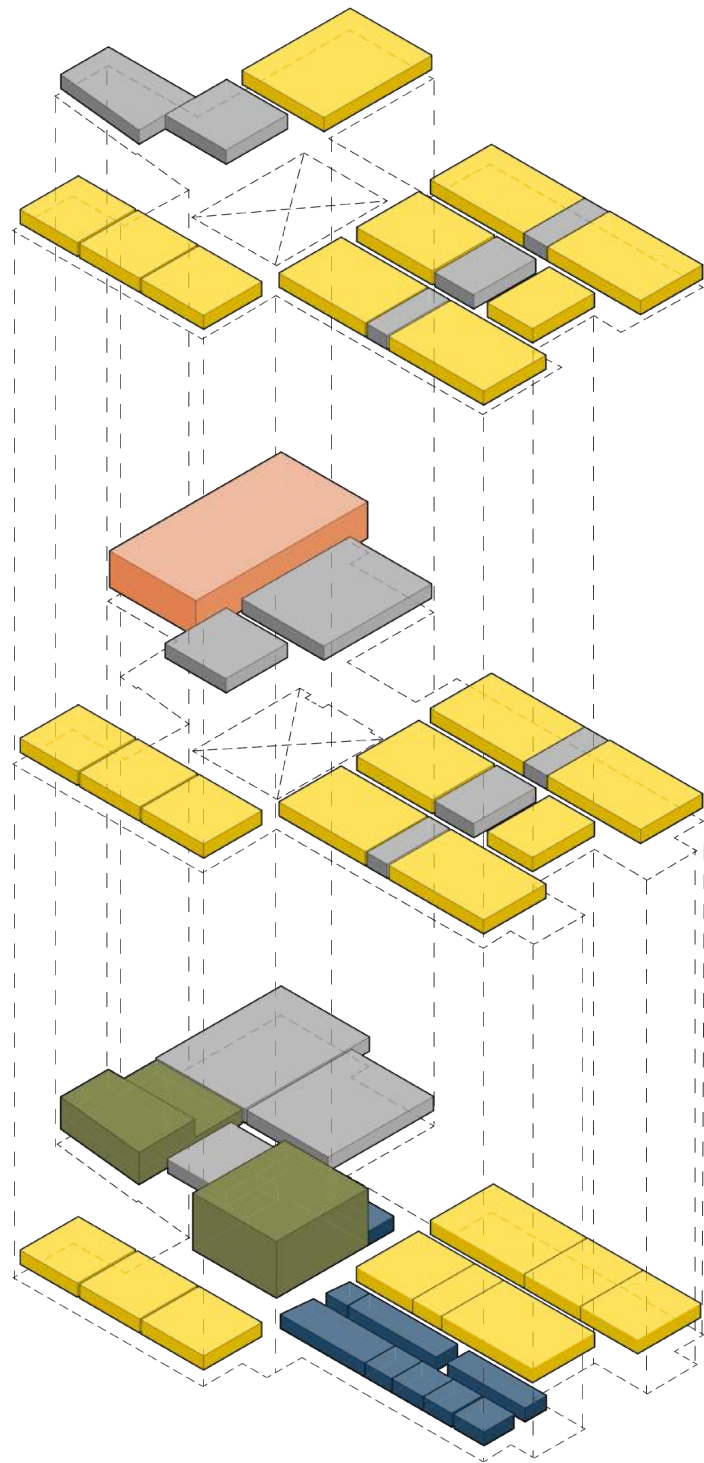
PHOTO: Learning staircase in the main gathering space.

I love the fabrication labs and classroom spaces but the biggest pleasant surprise is the common spaces such as the wide hallways and spaces in the center of the building. These have proven to be a huge asset in creating flexibility and allowing students spaces to work in small groups. Also it allows additional building spaces that students utilize when we are building physical models.

- iTech Administrator



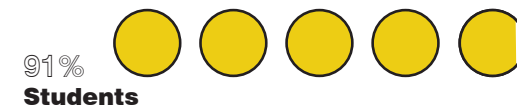




### Level 3

- Classroom/Collaboration
- Support

On a scale of 1-5, how well does the school promote innovation?



### Level 2

- Classroom/Collaboration
- Turfnasium
- Support



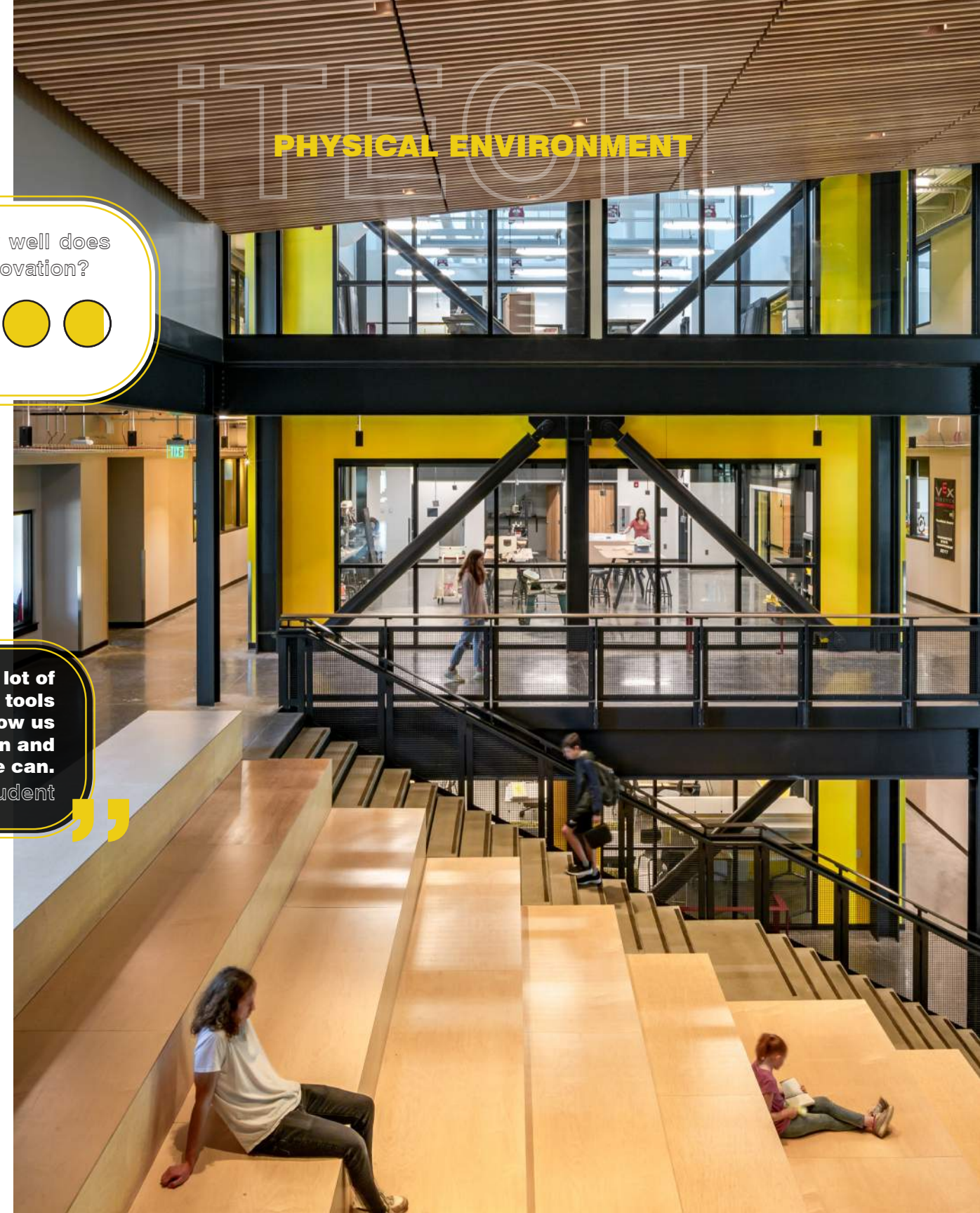
**[The building] has a lot of amazing, and modern tools and features that allow us to be the best we can and do the best we can.**

- iTech Student

### Level 1

- Classroom/Collaboration
- Gathering
- Support
- Admin

## PHYSICAL ENVIRONMENT

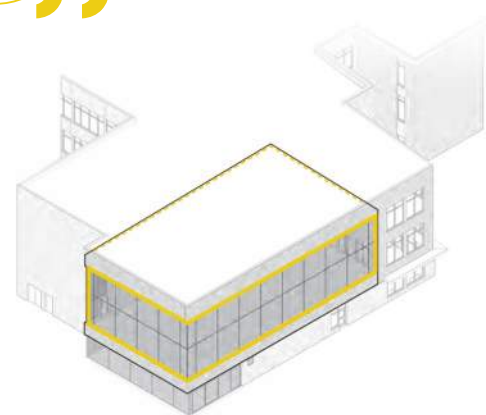






**The amazing outdoor turfnasium is so unique and perfect for our student population. We've offered a variety of unique units and experiences that were influenced by having the turf/outdoor setting. The Fitness Center has been a fan favorite for the students. They really enjoy pursuing fitness within a diverse environment. The attached classroom w/ moveable furniture has been a health classroom, rowing center and yoga studio this year.**

**- iTech Teacher**



Wall of mesh provides airflow and transparency while enabling ball sports.

## PHYSICAL ENVIRONMENT

The turfnasium is iTech's centerpiece physical education environment. Full-height windows provide dramatic visual connections between the dining hall and the turf court reinforcing the connections between nutrition and physical education. From standing within the turfnasium, the space seemingly floats above the ground allowing for expansive views of the restored landscape and outdoor physical education spaces. This effect is achieved through an innovative use of stainless-steel mesh screens, that are secured from the turf floor to the roof structure.

Despite its open outdoor appearance and atmosphere, the turfnasium is an entirely covered space. Mesh screens are located along the north and west walls of the space, allowing fresh air to flow through the space while protecting from the elements in the temperate, and often rainy, climate of the Pacific Northwest. This design promotes year-round outdoor learning and shelters students from the harsher elements; simultaneously it reduces heating and cooling loads in what would typically be a conditioned space.



The design for iTech meets the requirements for the Washington Sustainable Schools Protocol (WSSP). In addition, it was important to staff and students to expand on these features in ways that enhance the user experience. Below are a few examples that capture the school's commitment to a sustainable program:

## EMBODIED CARBON

Cross-laminated timber structure in key visible spaces

## OPERATIONAL ENERGY

The turfnasium moves a large portion of the building program to the exterior, eliminating HVAC loads on that space

Three-story building maintains a minimal footprint on site

Optimal daylighting and strategic shading of glazing on south facade

Digital visualization of energy use is displayed, allowing occupants to learn about the building's performance and understand how user behavior impacts the system

## RESOURCE CONSERVATION

Existing trees on site have been preserved to provide an outdoor play environment

Strategic water feature surrounding building that provides storm water collection and expression while acting as a learning environment for students

## HUMAN HEALTH

Building massing and site location provides maximized natural daylighting and focused views of nature

The turfnasium provides connection to the environment and outdoor air, emphasizing the connection between mental and physical health

Transparency between spaces provides safe and accessible learning opportunities for students, with a focus on highlighting project creation and presentation

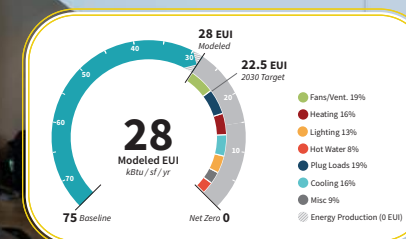
# PHYSICAL ENVIRONMENT

## Sustainability & Materials

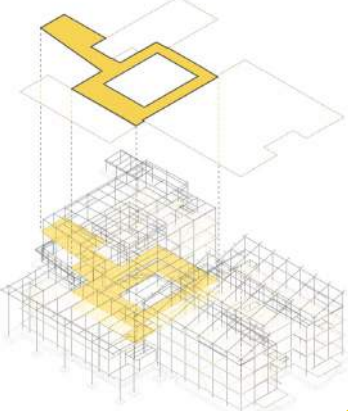
The design met and exceeded the required standards of the Washington Sustainable Schools Protocol. A key component of the district's commitment to sustainability was the delivery of a high-efficiency building that prioritizes human health and comfort. Some of the key ideas we used to ground our choices around energy efficiency include:

- Maintaining a minimal footprint on site and revitalizing the landscape back to its native state
- Providing optimal daylighting and indoor connection to nature
- Showing the building's efficiency as a learning tool through digital visualization of energy use on display, exposed systems, and visual transparency to the mechanical spaces

The Energy Use Intensity (EUI) graphic below illustrates the overall performance of the building against the AIA 2030 commitment target.



On the second and third floors, over 9,000 sf of Cross-Laminated Timber (CLT) serves as structural flooring near the core of the building. CLT is material made by gluing lumber boards together at high-pressure, creating a natural, lightweight and low-carbon material that matches the strength and durability post-tension concrete. This has the added benefit of providing users a textural experience that looks and feels closer to nature.





## RESULTS OF THE PROCESS & PROJECT

iTech is a purpose-built school that has been developed to serve the unique goals and aspirations of tomorrow’s problem-solvers. Across the program, the building embodies and exemplifies the “Process on Display” mantra so closely held by district leadership, students, staff, and families. By giving students access to an inspiring environment, teachers, and the tools necessary to create truly innovate solutions, it fosters innovation on a daily basis.

It represents a one-of-a-kind educational environment that is directly connected with one of the region’s most established colleges, offering its students a unique opportunity to experience and test out college life, as well as a platform to connect with businesses or alternative career paths that require a more require more technical or vocational skills. It serves as a model to other schools for what is possible when big ideas, passion and an inclusive approach to learning all combine together.

Above and beyond its academic benefits, iTech provides an environment that is centered on connection at every scale. From peer-to-peer connections between students, to the way the building is anchored to its context and the surrounding landscape, the biggest lesson it provides is being part of a greater community that is safe, inspiring, and engenders a sense of belonging.

PHOTO: Main gathering space

80%

OF TEACHERS SAID BEING  
IN THE NEW BUILDING  
CHANGED THE WAY  
THEY TEACH

100%

GRADUATION  
RATE

35%

OF ITECH STUDENTS  
GO TO WSU OR WSU-V  
FOR COLLEGE

one iTech		Schedule	
		TUESDAY	THURSDAY
1 <sup>st</sup> Lunch Schedule (Lunch A)		2 <sup>nd</sup> Lunch Schedule (Lunch B)	
Period 1/5	8:35 - 10:55 80 minutes	Period 1/5	9:35 - 10:55 80 minutes
Passing	10:55 - 10:58 3 minutes	Passing	10:55 - 10:58 3 minutes
Advocacy	10:58 - 11:23 25 minutes	Advocacy	10:58 - 11:23 25 minutes
Passing	11:23 - 11:26 3 minutes	Passing	11:23 - 11:26 3 minutes
1 <sup>st</sup> Lunch	11:26 - 11:56 30 minutes	Period 2/6	11:26 - 12:46 80 minutes
Passing	11:56 - 11:59 3 minutes	Passing	12:46 - 12:49 3 minutes
Period 2/6	11:59 - 1:19 80 minutes	2 <sup>nd</sup> Lunch	12:49 - 1:19 30 minutes
Passing	1:19 - 1:22 3 minutes	Passing	1:19 - 1:22 3 minutes
Period 3/7	1:22 - 2:42 80 minutes	Period 3/7	1:22 - 2:42 80 minutes
Passing	2:42 - 2:45 3 minutes	Passing	2:42 - 2:45 3 minutes
Period 4/8	2:45 - 4:05 80 minutes	Period 4/8	2:45 - 4:05 80 minutes





# iTECH

## RESULTS OF THE PROCESS & PROJECT

### Achieving Educational Goals & Objectives

At the conclusion of this extensive design process, following all of the engagement that informed its aesthetics and program, the end result is a world-class school that is built to serve the unique goals and aspirations of tomorrow's problem-solvers.

### Achieving the Goals of Vancouver Public Schools

Under the VPS Design Strategic Plan, there are three desired outcomes:

- Next generation schools to support future ready graduates through a comprehensive vision driven stakeholder (internal and external) input process
- Optimize eligibility and maximize collection of state assistance
- Complete projects on-time and within budget

Considering its layout and comprehensive design process, construction schedule and enrollment process, iTech has fulfilled these outcomes in every way. The range of feedback from students, teachers and administrators regarding the new school is further evidence of iTech's success in achieving the district's goals.

Additional highlights include:

- iTech's four-year (on-time) graduation rate is 100%.
- iTech was one of seven schools to earn Washington state's "Innovative Schools" designation for 2016 and was the focus of a "Most Innovative School Districts" case study by the American Association of School Administrators in 2018.
- The school currently serves around 400 students with plans to grow to 670 over the next few years.

**I can officially say the coolest thing going on in the state of Washington is iTech.**  
- Washington Governor Jay Inslee

exceptional relaxed amazing grand  
collaborative engaged spacious progressive  
innovation enticing light possibility cool flexible  
comfortable focused industrious cool  
comforting new open combined  
inspiration airy opportunity mixed textures stairs  
techy cooperative versatile  
windows inspiring busy large clean beautiful space viewing points  
industrial futuristic energy





PHOTOS: iTech teachers, students, and family members attend the opening of the school



100%

Teachers and Administrators

On a scale of 1-5, how well has the school met the District's goals of:

**INSTRUCTIONAL QUALITY**  
**FLEXIBLE LEARNING**  
**ENVIRONMENTS**  
**PROGRAMS OF CHOICE**  
**FAMILY ENGAGEMENT**  
**SAFE & SUPPORTIVE SCHOOLS**

# EDUCATIONAL SPECIFICATIONS

The VPS Design Strategic Plan (2014-2020) formed the main backbone for the design, followed closely by the information that came out of the Design Symposium. The overarching goal for the project was to “prepare future ready graduates with next generation skills to be college, career and life ready. Speaking more broadly to the strategic plan, the purpose, strategic initiatives and design principles included the following:

## Purpose

- Ensure high quality future ready learning environments to enhance teaching activities and improve learning outcomes
- Create equitable future ready learning environments for all students
- Incorporate design symposia stakeholder input, district design principles and strategic design initiatives in the design process

## Process

- Utilize a project leadership structure to facilitate the design and decision-making process
- Effectively utilize in-house and external expertise to form project teams that will achieve the desired outcomes
- Utilize ad-hoc stakeholder input throughout the design process

## VPS Design Principles

- Engaging learner centered school
- Anywhere, anytime access to technology for learning
- Family and community learning partnerships
- Safe and supportive learning environment
- Adaptive and functionally inspired spaces





# iTECH

## EDUCATIONAL VISION

The heart of iTech empowers students to think critically, innovate, and problem-solve through collaboration with the design process on display.

Vision:

- Develops Future-Ready Students who are INNOVATORS and CRITICAL THINKERS
- Instills GRIT and builds CONFIDENT learners
- Solves REAL-WORLD problems
- Forms a COMMUNITY of Tech and Partnerships
- Embraces that "AHA MOMENT" where learning "clicks" for a student, on their INDIVIDUAL journey
- EMPOWERS STUDENTS to decide: "What problem do you want to solve?"
- Celebrates and respects: Our STUDENTS TAKING CHARGE of their own learning!

PHOTOS: iTech students learning through making and collaboration projects



**A lot of projects at iTech require students to be self-advocates and independent. I think that a lot of the projects we've done at iTech have forced me to learn to take initiative for myself and use my own ideas.**

- iTech Student



# ITECH



**Stormwater facility**

Rain runoff from streets, yards, and roofs is cleaned at this facility before being released into groundwater, lakes, rivers and streams.

Help protect our watersheds and aquifers. Do not dump anything here. Never put anything down a storm drain.

**Prohibited:**

- Compost, yard debris and grass clippings.
- Pick up dog waste and put it in the trash.
- Recycle or safely dispose of used oil, paint products, and chemicals.

For questions or to report a problem with this facility, call:

(561) 397-0445

Clark County Maintenance