



Sammamish High School

» 2019 James D. MacConnell Award

01 » executive summary



When Sammamish High School applied for and received an *Investing in Innovation (i3) Grant* in 2010 from the Department of Education, they were able to embark on an ambitious project to fundamentally evolve the learning experience in their school.

As the school began planning towards a new Problem Based Learning (PBL) curriculum with its focus on Science, Technology, Engineering and Mathematics (STEM) literacy and skills, it was clear that the existing building was an impediment to their goals. At the same time, the school district was involved in a decades-long program of school replacements and modernizations, with Sammamish scheduled as their final high school project. This fortunate alignment of events provided the unique opportunity to co-develop the planning of curriculum and facilities simultaneously.

To accomplish this, the design team needed to remain agile and respond directly to shifting needs as the curriculum planning evolved. The early decision to distribute

The project presented a unique opportunity to do things differently - to directly align the new building with changing pedagogy by coupling the work they were doing on the (PBL) grant simultaneously with the facility design team's process."

**- Jack McLeod,
Director of Facilities &
Operations, Bellevue
School District**



Great Lawn rising to entry level

studio spaces throughout the building, for instance, emerged long before the exact uses for these spaces were defined. As a result, the physical design approach intimately reflects, integrates, and supports the evolution and implementation of the re-visioned PBL program.

The first step in defining this integration was establishing guiding principles and goals to meet the unique demands of the new curriculum. Working with a dedicated group of students, teachers, parents, and school staff, the team identified three primary goals or creating an environment (1) where making, doing, and communicating define the character of the school, (2) where the visible presence of these activities inspires students to engage in learning, and (3) where all students participate in a journey of discovery as One School.

The architectural response to these goals creates a 3-story building interconnected through a pair of vertical commons spaces. Large fabrication and flex studios, performance spaces, the library, primary circulation routes, and other student resources are gathered around these spaces. On the upper two floors, classrooms and studios are organized in clusters centered around shared learning areas. A large sloping lawn elevates the main entry to the second level, organizing all of the school's primary functions – including administration, commons, main gym, and library – at this mid level, providing close connections to both the upper and lower levels. Throughout the building, an emphasis is made on transparency and access to learning, inspiring curiosity and inclusion, and embracing the role of social learning inherent in the high school experience.

The design of this school is best described as the spatial embodiment of a unique learning community. The opportunity to engage in the design of a school facility simultaneously with development of that school's curriculum has resulted in a facility that embraces the defining characteristics of this community's ethos while establishing a symbiotic relationship between building and learner.

02 » scope of work & budget



Sammamish High School, in Bellevue, Washington, is a completely redesigned campus that includes two new principle structures: the academic building and the athletic building, as well as an independent glass studio. In addition, an existing performing arts theater and lobby were incorporated into the new design. The entire site was redesigned with the goal of creating a safe, coherent campus with a network of buildings and outdoor spaces that holistically serve the school's unique curricular goals and the needs of the local community.

In 2011, Sammamish High School served approximately 1085 students in grades 9 through 12. The existing school was built in 1959 as a series of single-story buildings connected by external covered walkways.

A full-fly loft theater (retained) and new administration building were added in 2004.

The school played a strong role in the community, and while enrollment had grown dramatically over time, recent years found it declining. The programmatic needs of the school were also evolving to include a wider range of courses and activities with the implementation of PBL. After an extensive evaluation, the school district determined that the existing high school should be replaced rather than renovated.

Phased construction began in 2014 and was completed in Fall 2017. A complex phasing schedule, on an extremely tight site, allowed students to remain and thrive on site throughout construction.

New Building Area:
320,000 SF

Site Area:
1,655,715 SF (38 acres)

Final Construction Cost:
90.6M

Student Capacity:
1,800

Type of Construction:
Concrete & Steel, Type II-B

Type of Project Delivery:
Design/Bid/Build



03

» engagement



COMMUNITY

As the fifth largest city in the State of Washington, Bellevue's population of approximately 145,000 enjoys a thriving downtown, with a rich retail shopping area that is home to international technology, engineering, and financial corporations. At the same time, some areas of the city, including those served by Sammamish High School, face the challenges of underserved populations experienced by other cities.

Sammamish High School serves the most ethnically and economically diverse population of students at the secondary level within Bellevue School District, with over 35% speaking a first language other than English. 43% of their students qualify for free or reduced lunch, and linguistic diversity includes 40+ languages from 50+ countries. This diversity is also reflected in the city's overall population, with over 39% of residents born outside of the United States. While more than 66% of Bellevue's over-25 community has a Bachelor's degree



City of Bellevue

or higher, household income covers a wide range of earnings from less than \$25,000 (12%) to \$200,000 or more (19%).

STAKEHOLDERS

SHS staff recognized the need to revitalize both the teaching and learning environments at Sammamish to achieve greater success for all students. And they decided that the change had to be big. So, in 2010, they applied for and received an *Investing in Innovation (i3) Grant* from the Department of Education. From the grant:

"Our exceptional innovation is the development and implementation of a scalable, sustainable, 21st century skills-based program, which represents a fundamental shift in a comprehensive high school learning experience. Based on a coherent, problem-based curriculum, we will help our students develop the skills to successfully compete in the 21st century job market."

Upon receiving the grant, a faculty leadership team met for 5-days of dedicated professional development, restructuring course curriculum across all subject areas to be grounded in Problem Based Learning (PBL). The grant also allowed teachers to meet for one dedicated hour each week (for 5 years) to specifically discuss and refine their new coursework. Along with curriculum redesign came establishing partnerships with local business experts in STEM-related industries such as Microsoft and Boeing. Leveraging the local community for inspiration and insight into real-world problems has become a basis for many of the PBL projects.

All of this activity was undertaken while still housed in their 1950's era buildings. When the school district made the decision to rebuild a new SHS, the teachers

"What we do in PBL, it builds on itself, so that these projects become part of the culture and traditions of the school... What that culture says to students is that what you bring to the table is valuable."

**- Rob Hallock,
Sammamish High
School Teacher**



immediately recognized the amazing opportunity to re-form both their curriculum and physical environment at the same time.

While it is not uncommon to use theoretical design challenges as the basis for a PBL project, this convergence offered the unique opportunity to participate in a real-world architectural project on a real-life site: a PBL project of designing their future school to support their PBL curriculum.

The passion of the Sammamish educators provided a deep, rich foundation for the challenges and successes ahead.

Totem Design Team

After a year of pedagogical research, curriculum writing and faculty training, a core group of Sammamish teachers, students, parents and District staff came together as the Totem Design Team. This group met the architectural team at the design table to collaborate and bring forward the program needs while creating and refining new coursework.

The team met on a bi-weekly schedule throughout the pre-design and programming phases and then at scheduled intervals throughout the remainder of the design process.



Totem Design Team

- Tom Duenwald, (former) Principal
- Jeff Bright, Teacher
- Joliene Tang, Teacher
- Kay Gilke, Teacher
- Kim Herzog, Teacher
- Ann Lanning, Parent
- Dominic Racelis, Student
- Jeff Sweet, Student
- Ale Flores, Student

Bellevue School District

- Jack McLeod, Director of Facilities
- Nancy Larson, Manager of Facilities and Maintenance
- Jim O'Malley, Capital Construction Manager
- Kyle McLeod, Project Manager

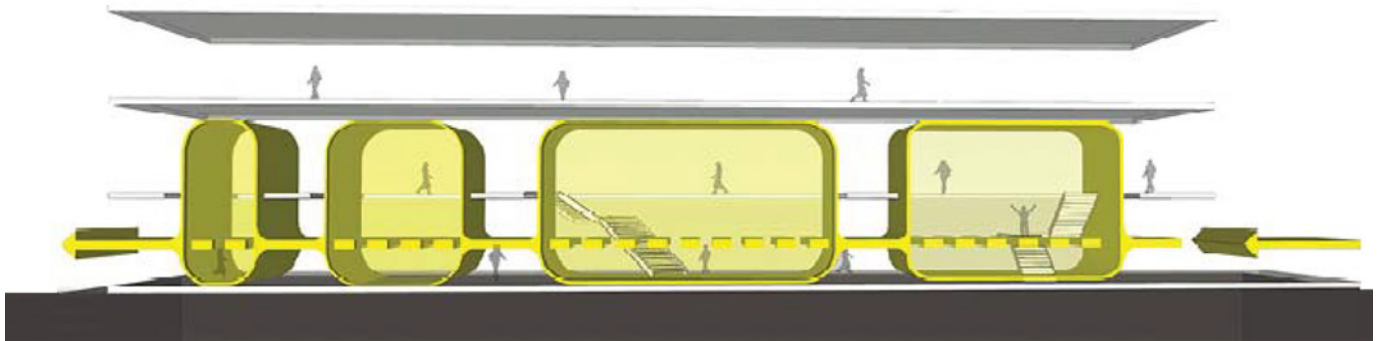
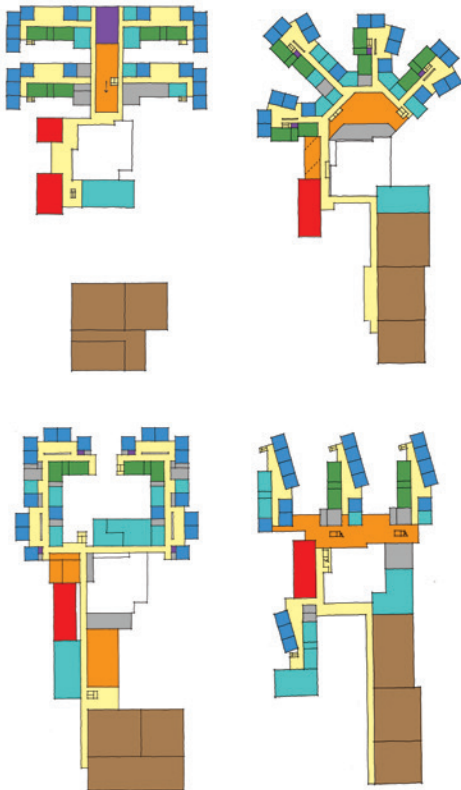
CHALLENGES

The new school was set to be built on the same site as the existing school, which is relatively large and flat. This seemed simple enough except for the fact that the new school would need to serve up to 1,800 students, almost twice their enrollment in 2012. Students also had to remain on site during the entire construction process while preserving and maintaining access to an existing performance hall. These factors, combined with extensive parking requirements, severely limited the allowable footprint for the new structure. The resulting need for a taller building was a significant departure from the current single-story campus.

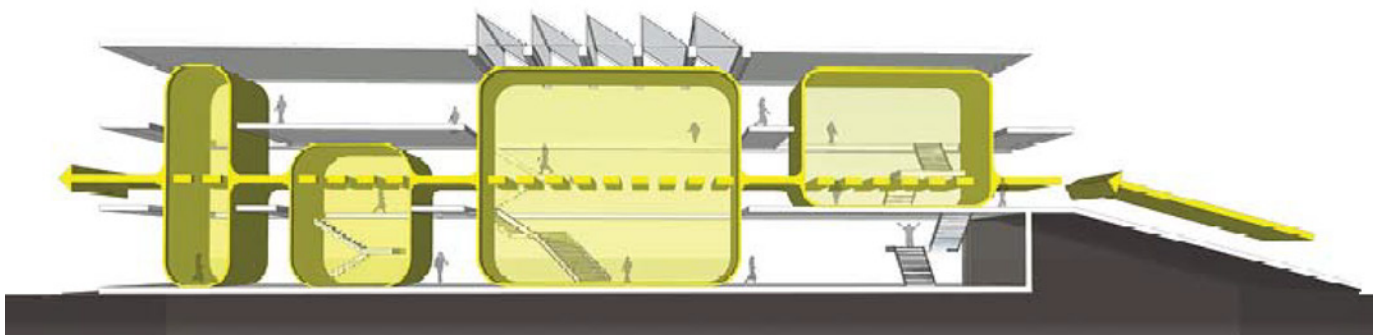
What about a three-story school?

Accustomed to a single story school, the suggestion of a 3-story building brought many concerns to teachers and students. What about time impacts between classes as students navigate between floors? In a school intended to foster collaboration, would there be cultural impacts from isolating students by floor or potentially creating separate identities within the school?

After several meetings of puzzling over various site scenarios, a student on the Totem Design Team asked the question that changed everything: What if the main level was in the middle? That way no student would ever be more than one level away from the heart of the school.



Typical Sectional Diagram
Organization of common areas concentrated at lower level



Sammamish High School Sectional Diagram
Organization of common areas concentrated middle level

3 school & community engagement

The creative energy in the room was palpable as the entire Totem Design Team gathered around the site model, stacking and moving program pieces around with excitement and curiosity. The next hurdle was how to make the second floor feel like the primary entry point and center of student activity, without forcing people up a flight of stairs the minute they arrive.

The solution: build a hill. Not a steep summit, but a gentle, sloping ramp landscaped with grass and trees; a “great lawn” creating “a gentle procession upward to support the new datum.” Even before the question of “how” was asked, District staff had an answer: “Well, this solves the question of where to put all the fill from the grading at our other project site.”

Within ten minutes, the aversion to a 3-story school evolved into an innovative concept that exemplified the goal of “One School” - the idea of a Great Lawn leading to a centrally organized building in both plan and section.



AVAILABLE ASSETS

- **Faculty leadership and PBL teachers:** Their spirit for improving the success of students was the spark to the innovations in both curriculum and spatial transformation at Sammamish High School.
- **Investing in Innovation (i3) Grant:** Award of these funds provided a platform upon which the educators could build their coursework and the design team would see the vision.
- **The Totem Design Team:** This dedicated, engaged group of administrators, teachers and students were critical to the discovery process, offering insights that defined the goals and outcomes for their new school.
- **Access to technology and industry partners:** Engaging these resources influenced not only the problems that would become PBL coursework but also the collective shift from designing a traditional school to a facility more similar to the future workplaces of SHS graduates.
- **District + design team relationship:** Extensive history, experience and continuity with district capital improvement staff and city permitting offices enabled the design team to focus on the design goals and engagement with the Totem Design Team.
- **Bellevue School District, Bellevue Schools Foundation and parents:** Their support at all stages of the project, from the work to pass the bonds needed for a capital improvement of this scale, to their continued endeavors to enhance the school environment and learning experience.

“Yeah, I have a lot of friends who struggle with English, 'cause they either just came in, like, two years ago or just barely came. So, like, if they're in a classroom with a lot of lecturing, not enough group time, they're not gonna learn English.”

**- Rosendo,
Sammamish High
School student**

VALUE TO COMMUNITY AT LARGE

Innovation and technology have been a driving force behind the development and growth of the greater Puget Sound area for many generations. Because of this, the emphasis on STEM programs was a natural fit for Sammamish High School. In preparing for the grant, however, teachers identified a critical challenge within their framework: the fact that women, ethnic minorities, and other under-represented groups continued to face barriers in STEM fields. To that end, they developed curricula targeting the needs of under-represented populations to help these students develop the needed skills (e.g., critical thinking, adaptability, and effective communication) for today's rapidly changing economy.

The process also engaged the local professional community on another level. With the focus on preparing students for an unknown future, the team expanded its exploration beyond peer facilities.

Often, as a matter of course, design teams tour other notable school facilities to provide students and teachers with an understanding of current trends in school design. For the Totem Design Team, however, tours were expanded to encompass evaluating innovative higher education facilities as well as high-tech work spaces and labs. These included: a local high school, an interdisciplinary innovative college building, a university horticulture facility, and the Seattle Google offices. The site visits offered opportunities for students to interact with

future employers and were a key to the team's understanding of the characteristics inherent in cutting edge spaces for collaboration and creative work.

Refocusing the curriculum also refocused the development of the building and spaces needed to support personal career endeavors in step with the growing technology and industrial corporations that call Bellevue and the Puget Sound area home. This new learning environment celebrates and continues the legacy of innovation on which the community at large is built upon.

Second floor Study Commons



04

» educational environment



EDUCATIONAL VISION AND GOALS OF THE SCHOOL

The building organization is the result of close collaboration between the architects and the Totem Design Team. An early step in the design process was to identify the principles that would guide the design team in the effort to develop a building organization responsive to the unique demands of the curriculum, program, site, and school community.

The following Guiding Principles are the product of this collaboration, and served to guide the work of the design team:

We are One School

- Establish a singular and welcoming identity of enduring character.
- Make visible the work of students and faculty.
- Maximize visual connections between spaces to encourage interaction and spark dialogue.
- Provide an easily supervised, safe and secure facility.
- Provide common areas that encourage interaction across grades and disciplines.

A Variety of Quality Learning Environments

- Create a variety of spaces for small, medium, and large group learning and interaction.
- Provide spaces that support and encourage project based learning.
- Organize spaces to encourage interaction, collaboration, and innovative uses – both for students and staff.
- Integrate display and presentation spaces throughout the school.



"This idea that the whole school is focused on problem-based learning is really powerful.... 15 years of teaching here, I've seen quite a lot... I'm good at what I do; I would like to be better. I would like to be a more effective teacher."

**- Jayesh Rao,
Sammamish High
School Teacher**

A Flexible and Adaptable Context

- Provide flexible spaces that can easily adapt to changes in teaching and learning styles.
- Create common spaces and learning resource areas that support multiple functions.
- Provide variety and flexibility in furniture types and arrangements.
- Integrate spaces to create and construct within learning areas.
- Provide seamless access to technology.

A Professional Perspective

- Foster learning environments reflective of contemporary professional environments.
- Provide spaces to support mentoring and interaction with the professional community.
- Provide clear wayfinding and zoning of the campus for students, staff, and visitors.
- Provide faculty and staff areas to support distributed leadership and professional collaboration.

An Awareness of the Environment

- Establish strong visual and physical links between interior and exterior spaces.
- Maximize views and daylighting.
- Provide outdoor learning opportunities.

From these Guiding Principles came the idea of an environment where making, doing, communicating, and learning define the character of the school, and where the visible presence of these activities inspires students to engage in learning.

4 educational environment

SUPPORTING THE CURRICULUM

After receiving the i3 Grant, teachers dove head first into creating a new PBL program. Teachers were challenged to work in teams to evolve their curriculum and embrace PBL themselves. They were given a one-period release to explore, design and test their new coursework, and to gather feedback from students. The process brought teachers back to their coursework planning and design stage, continually refining their courses and returning to the seven key elements of Problem-Based Learning.

This work would translate into the keys to understanding how the new facility should support not just one, but multiple new approaches to teaching and learning within the same school.



Shared learning area

What does a PBL-based, STEM-inspired High School look like?

Given the broad-based, holistic nature of the program underway at Sammamish, rather than looking solely to the world of school design, we broadened our definition of learning environments to include any place where creative work was being supported by innovative design. After visiting universities and large businesses, we observed the blending of private, public and presentation spaces; open plans that invite collaboration but also offer quiet places for contemplation; laptops, tablets and other devices everywhere; casual seating and gathering nooks; indoor-outdoor connections and green space; color and the sense of playfulness.

Students, staff, parents and district officials saw many parallels among these environments, particularly in terms of the outcomes that hope to inspire: creativity, collaboration and innovation. While the classroom still became the basic organizational unit for SHS, educators specifically requested greater variety in both scale and amenity of learning environments.

"We want to make learning visible," explained one of the science teachers. "and inspire a culture of learning... that can be lead by students." In response to this, the organization of the school emphasises connections through the inclusion of open areas, flexible groupings, transparency, and inter-classroom connections. Acoustical considerations were a key component of the design as well, allowing the highly social nature of high school students to co-exist with the open and accessible nature of the design. For the students and teachers of Sammamish High School, learning 2.0, much like work 2.0, will happen everywhere, with collaboration and technology at the core.

SUPPORTING A VARIETY OF LEARNING AND TEACHING STYLES

While working closely with the Totem Design Team, the architectural team simultaneously interviewed faculty from all departments and conducted a three-day programming session to understand individuals' experiences and needs. Staff were encouraged to think about how

Problem Based Learning:

1. *Authentic problems*
2. *Authentic assessments*
3. *Student voice*
4. *Collaboration*
5. *Use of expertise*
6. *Culturally responsive instruction*
7. *Academic discourse*



Large STEM studio adjacent to Study Commons

project-based learning and rapidly advancing technology might shape their future spaces in ways their current classrooms could not.

STEM and PBL curriculum mandates a design which recognizes the fundamental link between educational activities and the spaces which support them. Discoveries from the engagement process with the Totem Design Team and teacher groups, along with the Guiding Principles, helped to define the spatial accommodations appropriate to specific educational processes and social experiences.

Study Commons

The Guiding Principles outlined that Sammamish HS should be characterized by a culture of commitment to inquiry and learning. Translating this idea into architectural terms led to an emphasis on spatial connections and an overall sense of unity, which led to the concept of the Study Commons.

Located at the heart of the school, these two, 3-story spaces combine the functions and characteristics of libraries, presentation spaces and group breakout areas with

4 educational environment

those of a traditional Commons - a space used primarily for food service and characterized by social interaction. These spaces are based on the recognition that socialization is a central and inseparable part of educational culture. The larger of the two Study Commons is designed to accommodate teaching and learning in large or small groups, for lectures, presentations, collaborative work, and casual social interaction. The smaller space is designed for small group and individual study while doing double duty as a lobby/pre-function space for the performance hall.



Study Commons first floor presentation space



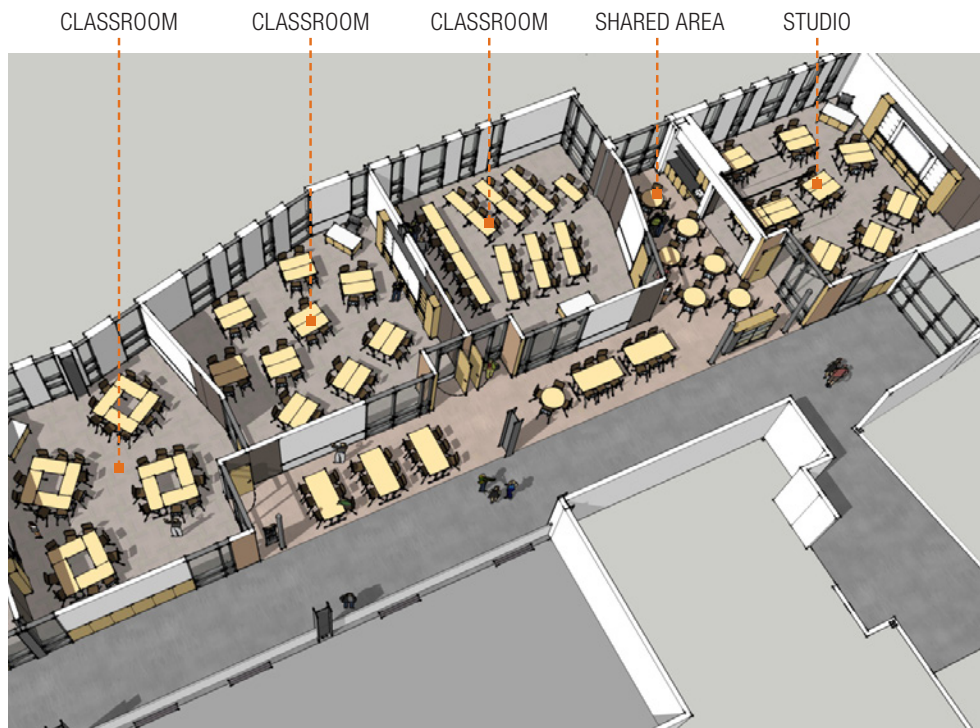
Lobby Commons small group and individual work space



Shared learning area adjacent to studio space

Distributed STEM Studios

Unlike traditional schools, SHS integrates spaces for PBL and STEM-based curriculum. Large STEM studios are located adjacent to the large Study Commons, while smaller studios are distributed within classroom clusters. Each learning cluster is comprised of 3 classrooms, a shared area, and either an additional classroom or a studio space. The studio space is distinguished from other classrooms by incorporating overhead power drops, sinks, and additional storage into the space. Distributing the studios throughout the school becomes another way of supporting the interdisciplinary aspect of the coursework, even for those students who are not taking STEM classes. Distribution of the studios also lends greater diversity of educational content to activities within the adjacent shared areas.



4 educational environment

ADAPTABLE AND FLEXIBLE ENVIRONMENT

The entire school is designed to be adaptable for the growing population of students and their evolving technical needs. Raised bar seating with built-in outlets supports heavy computer use, as every student is assigned a computer for use throughout the school year. Writeable wall surfaces abound in corridors, shared areas, and classrooms. Tackable wall surfaces located both inside classrooms and in the public area of the school, along with display cases located in each cluster, provide ample room for displaying student work. The large Study Commons is also supported by projection and writeable surfaces.

Clusters and Shared Learning Spaces

The keys to successful shared areas include providing daylight and views, a variety of seating and table space, transparency and visibility from classrooms, appropriate amenities such as whiteboards, and subtle, but clear definitions of space to instill a sense of ownership.

Multiple configurations of shared area clusters were explored during the design phases. In the end, the Totem Design Team rejected the notion of well-defined individual clusters in favor of an organization that more closely linked each cluster with the life of the school, therefore reinforcing the principle of One School. The result is a modified L-shaped shared learning area that is directly linked to the primary circulation corridor of the school, yet reaches to the exterior of the building providing daylight and views.

The shared areas at SHS are a direct response to the PBL curriculum, and the principle of integrating disciplines through the application of interdisciplinary problem solving.



Shared learning area

"As teenagers I think often what they fight against is a sense that life is happening to them. So we give them classrooms where they help direct what's happening there. ..This is not a place that you can hide. This is a place where we want the best of you, we see the best IN you, now let's bring that out."

**- Adrienne Curtis
Dickinson, Sammamish
High School Teacher,
PBL Leader**

Classrooms and STEM labs are grouped together in clusters. Each cluster includes a shared area at its core which serves as a flexible meeting space available to the adjacent classrooms.

These shared areas accommodate self-directed individual work, group work of a range of sizes, and presentations utilizing white boards and tackable wall surfaces. Each shared area also includes a display case for student work, a sink and counter, as well as additional storage space. Classrooms are designed to support activities beyond lecture-centered communication. They feature multiple collaboration zones equipped with white boards and writing surfaces that encourage presentation and the sharing of ideas.



Third floor classroom

Shared learning area and classroom connection



05

» physical environment



PHYSICAL ATTRIBUTES

Materials and Massing

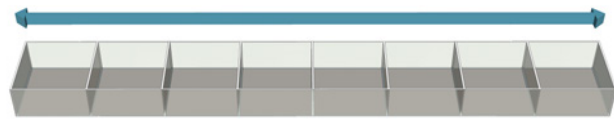
The school derives its form and expression from its circumstances and program organization. The extended “L” configuration of the floor plate is a direct result of the available building area after existing site constraints were considered. Constraints included phasing of the project around existing occupied buildings, the location of the existing performing arts center (to be retained and refurbished) and maintaining access to existing fields and parking during construction.

The articulation of the facade varies based on orientation and program, but in all cases consists of just 4 materials: 2 colors of metal panel, a natural buff masonry unit, and a terracotta colored brick. The most highly articulated facade is the west-facing academic wing where the brick skin of the building derives its vertical expression from the manipulation of classrooms and shared areas within - revealing the rhythm of repeating classroom clusters.

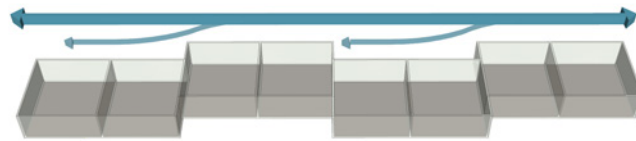
Elsewhere the expression of the building is rendered in large areas of additive or subtractive masses conforming to the needs of specialized programmatic elements. The dining commons area is enclosed in glass curtain wall, creating a sense of continuity between the interior and the outdoor plazas.

Site Development

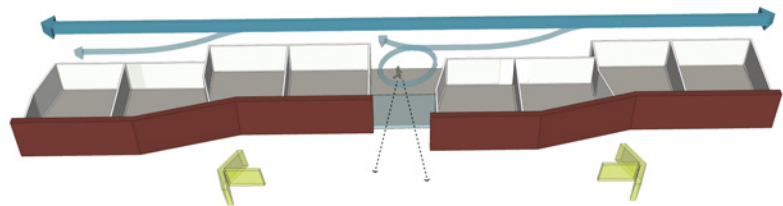
The principal outdoor space and organizational element for the campus is the Great Lawn. It rises gently from south to north, creating an ascending path of approach, flanked by the athletic building, from student parking to the school's front door. At the top an entry plaza serves both the academic and athletic buildings. The east portion of the plaza provides a direct connection to the existing fields via a monumental stair/tiered assembly space. This stair and the Great Lawn offer outdoor gathering opportunities and serve to connect all major program elements on campus.



Typical classroom & corridor



Classrooms shifted to create shared areas



Classrooms pulled apart to provide daylight to shared areas



Classrooms windows create fenestration rhythm



5 physical environment



Early connection for Study Commons

Interior

Vertical connections throughout the academic building provide physical and visual links while supporting a vision of a single school community. Two centrally located Common areas (the Study Commons and the Lobby Commons) connect all three levels. These connections serve to unite the school (guiding principle of “One School”) by making work visible both laterally and vertically. The result is an openness and transparency that characterizes all of the physical spaces and culture of the school.

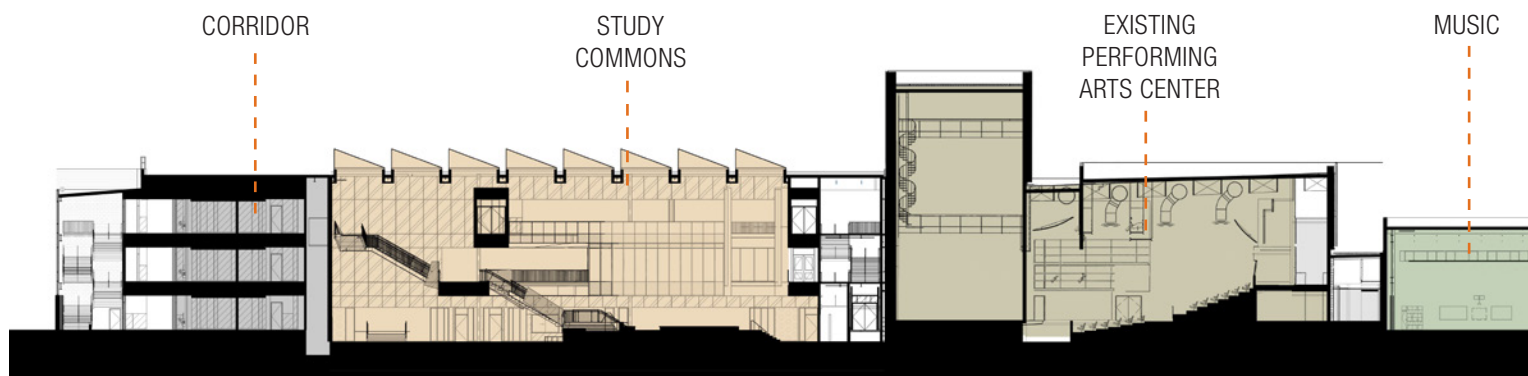
Additional relationships between the Guiding Principles and the physical environment are discussed below.

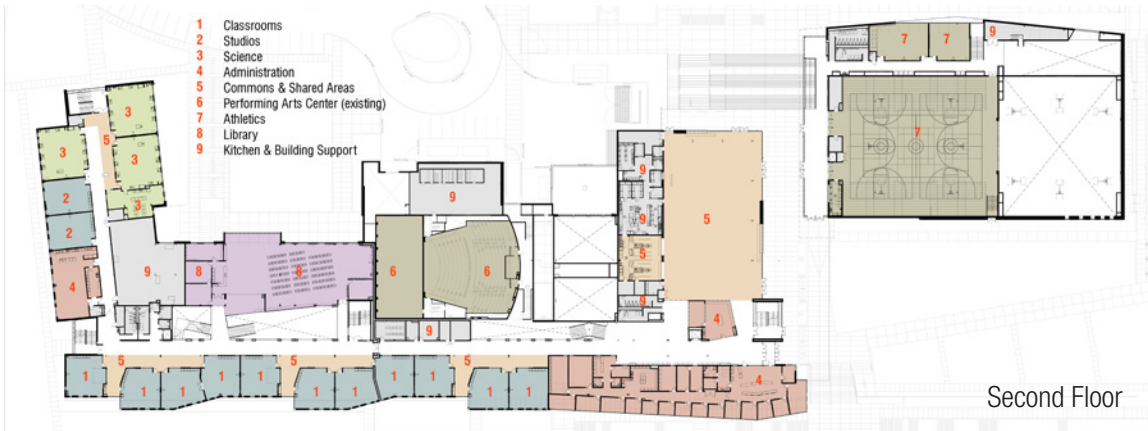
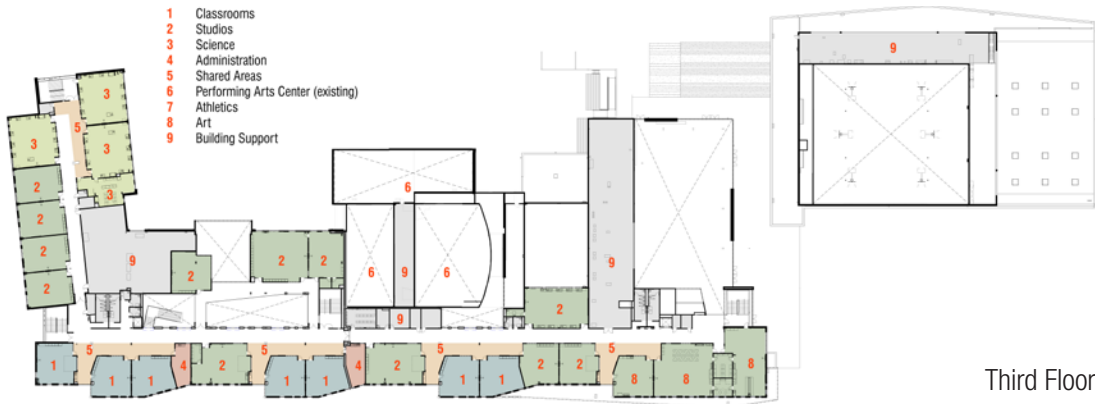
Making, Doing, Communicating

The first level of the Study Commons is adjacent to the core STEM and CTE studios. Large windows and doors directly

connect the commons with these spaces and expand their learning environments. Activities programmed for this area include: a tiered presentation/instructional space large enough for 2-3 classrooms (complete with, projection, and audio/visual instructional support technology); flat floor study areas with appropriate furnishings for group and individual work; and room for expanded learning activities with durable finishes, allowing for any number of creative endeavors.

The second level includes an expanded library study area that projects into the Study Commons. This “Front Porch” can be completely opened to the library by opening an overhead door, expanding the useful floor area of the library by 20%. With the door closed, this small-group study area becomes an expanded learning resource independent of the activities of the library while connected with the rest of the school.





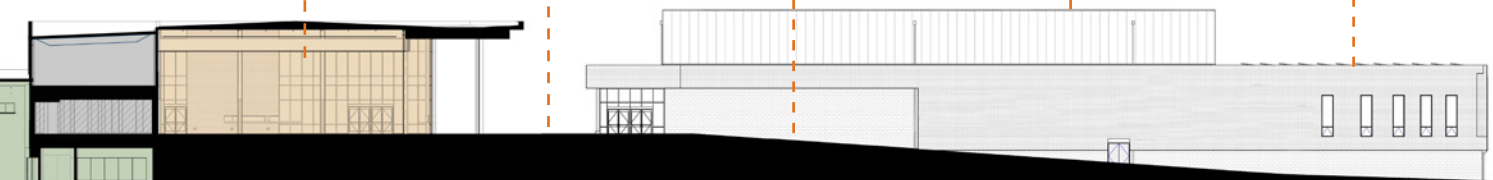
DINING
COMMONS

PLAZA

GREAT
LAWN

GLASS STUDIO
GREEN ROOF

ROOFTOP SOLAR
PHOTOVOLTAICS



Longitudinal Section at Great Lawn

The third level STEM and computer studios were also designed with ample transparency and direct connections to small group areas overlooking the Study Commons.

Visible Learning

Transparency of first floor STEM fabrication studios and the open nature of the library are reinforced through the multi-story nature of the Study Commons. With the library anchored in the center of the space, it is visually prominent and readily accessible from all three levels of the school. The STEM fabrication studios that are often relegated to the “back lot” in traditional schools are given new prominence. With connections to the Study Commons, these active, hands-on learning environments are made evident to the entire school.

Outside of the studio spaces are cabinets and tackable wall surfaces for display of both flat work and 3-dimensional projects created by the students. This is a theme through-out the school as each grouping of classrooms includes areas for display and presentation of student work.

One School

“One school” means a sense of belonging, overcoming the social and physical barriers to participation in learning activities, and a shared commitment to inquiry. The interpretation through interior architecture of “one school” is an environment characterized by the presence of shared work, visual and spatial continuity between disparate functions, and an overall experience of activity, transparency, collaboration, and an invitation to participate.

The Commons are at the heart of Sammamish and were designed to unite the spirit of the school. They connect all three levels visually and physically through the use of stairs and bridges, while maintaining a sense of openness.

Science labs are grouped together at the northeast end of the academic building, 3 - 4 labs per floor. This arrangement allows for sharing of resources between science labs but avoids the isolation that can result from clustering all labs together on a single floor.

The Performing Arts Center has a dedicated entry and, along with the Lobby Commons, can be either integrated with or separated from the remainder of the academic building. This allows the PAC to function as a stand-alone public resource, or to serve the school community.



Robotics activity outside of STEM studio

“So we are front and center. A lot of times, CTE labs or shops are relegated to the edges of the building... we wanted to be central so that people could see what we’re doing, walk up to the windows and see what’s going on the shop and see how cool it is.”

**- Kim Herzog,
Sammamish High
School Teacher**



The school had an established hot glass program but it was not a part of the original modernization scope. Staff and community members fought to keep it as part of the art department curriculum and it was sited as a separate structure to support community use and access.



Library front porch

THE PROJECT IN THE CONTEXT OF LARGER COMMUNITY

High Schools play a significant role in their communities from both a functional and symbolic perspective. The new school responds to this through thoughtful zoning of the facility – allowing multiple community functions to take place at the same time, by providing a variety of outdoor spaces for community events (the Great Lawn, Student Plaza, and Grand Stair Forum) and through the central location of a Family Connection Center – developed to nurture community connections, support under-served students and families, and provide connections to other groups and services.

To create a welcoming campus the buildings and landscaping are arranged to reinforce a sense of place while providing comfortable functional relationships between buildings, outdoor spaces, and circulation pathways.

HOW THE PROJECT INSPIRES AND MOTIVATES

This is a school where communication and inquiry are prioritized and ever-present. The symbiotic relationship between curriculum development and the building design have resulted in a facility filled with an incredible variety of learning environments. This allows students agency in the choices they make, working in areas they find most comfortable and supportive of their needs, whether individually or in small groups.

Close attention has been paid to colors, material selections, textures, daylighting and internal transparency. There are many points in the building where it is possible to look completely through adjacent spaces to views in both directions, creating an open and engaging experience where students take pleasure in learning, within the context of their social and emotional needs as they prepare for their future roles in their communities.

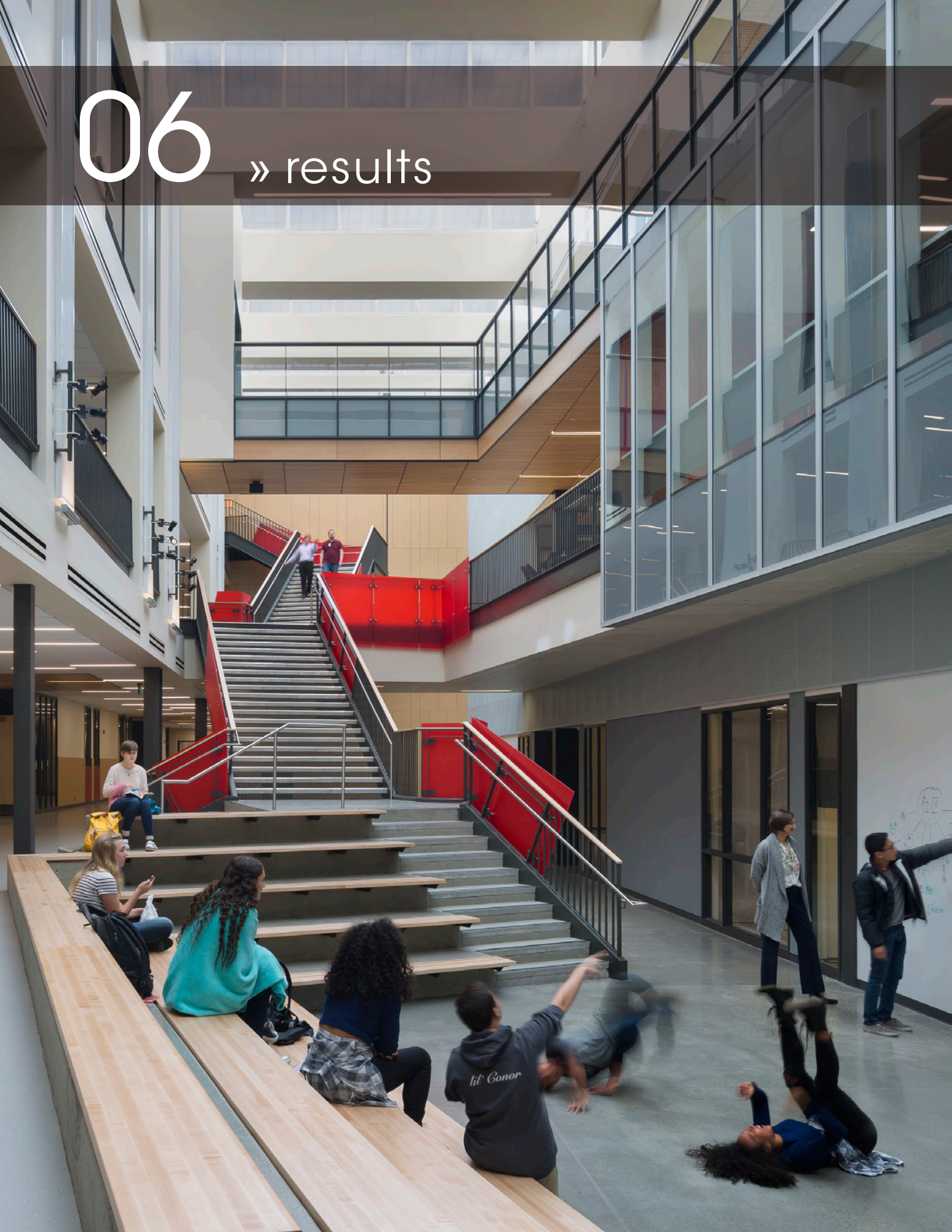


Approach to science wing





06 » results



HOW THE PROJECT ACHIEVES EDUCATIONAL GOALS AND OBJECTIVES

The following features of the new school were directly inspired by the guiding principles and have played an interactive role in the development of the new spaces:

A 3-story building with mid-level entry and multi-story common areas encourages interaction and collaboration between and among students and teachers; places all classrooms and learning areas only one level away from the main floor and student resources. The prior facility had exterior circulation with no visibility into learning environments - staff and students were isolated in their spaces and from opportunities to learn from others. Developing a 3-story facility introduced broader connectivity vertically and horizontally.

Classroom clusters with shared learning areas provide opportunities for communication and collaboration outside the traditional classroom environment. The shared areas accommodate small group meetings, display, presentation, and exchange of ideas, reinforcing the concept of the entire building as a resource for learning.

Fabrication/CTE studios are placed at the heart of the building. These spaces have historically been placed in remote corners of high school campuses, but are made visibly prominent to inspire students by seeing the work of their peers. Science programs are strategically stacked to provide access from each of the 3 levels, supporting interdisciplinary coordination and identifying science as an integral component of the school curriculum.

STEM studios are distributed within the learning clusters, allowing these studios to be easily accessed by all programs for exploration of relevant real world scenarios within the PBL curriculum. These flexible studio environments are also designed to provide environments more similar to potential future workplaces.

The Study Commons is designed as the central heart of the school, where social and academic interactions intersect to create endless opportunities to learn. Learning activity is visible throughout the day, while also providing a place where the student body can come together in a spirit that truly embodies the goal of One School.



HOW THE PROJECT MEETS DISTRICT GOALS

Bellevue School District focuses on three instructional initiatives to guide the development of District students – Academic Success, College and Career Readiness, and Positive and Productive Life. Along with the implementation of PBL, the new Sammamish High School facility has been instrumental in helping the school meet District-level goals.

UNINTENDED RESULTS & ACHIEVEMENTS OF THE PROJECT & PROCESS

- 15%** increase in students passing at least one Advanced Placement exam
- 300%** increase in ELL students and students with disabilities enrolling in Advanced Placement STEM classes (*from 20-68*)
- 10%** increase in students passing an advanced math course (pre-calculus or higher) before graduation
- 10%** increase in students reaching standard on the state math test
- 100%** of students spend the majority of their day in a PBL modeled classroom

Academic Success at Sammamish focuses on early proficiency in core subject areas. As an example, through the SHS Summer LEADS Program, students are given a head start into how learning in a PBL environment can be exciting and rewarding. This program sets the groundwork for future learning, which combined with this unique educational model has resulted in improved student performance.

College and Career Readiness programs prepare students with the knowledge and skills to be successful once they leave high school. By developing measurable skills that allow students to respond to real-world scenarios, they develop the self-confidence and problem-solving ability that will carry them into college and beyond. The physical environment at Sammamish High School underpins this work as it provides an image and sense of identity that expresses the community's values in the work they are doing there and that their future matters. Through an environment that builds



community, provides opportunities for student led learning, and mirrors the workplace, students are able to graduate with the confidence that they are ready for college careers.

Positive and Productive Life looks at the “whole child,” and ensures that students are prepared to lead a positive life by building social-emotional knowledge and skills, as well as developing a sense of connection to and responsibility for the community. The district understands the role of a high school in a community, and the new facility responds to this through thoughtful zoning, supporting multiple community functions on campus at the same time, offering a variety of outdoor spaces, and resources for students and families.

HOW THE PROJECT ACHIEVES COMMUNITY GOALS

Community Goals for the Sammamish High School mirror those of the district, with the most direct connection as outlined above in Positive and Productive Life.

Sammamish High School had often been overlooked within the broader community due to the notoriety of the other high schools in the district. The new-found pride in the design of the school has strengthened community ties and nurtured a desire on the part of teachers and staff to rally together and strive to do better for their students. As the student enrollment continues to grow, a stronger community is being created here as they continue to develop their Problem Based Learning model within a facility specifically designed to support it.



“High schools have been very resistant to change. I think a lot of high schools, you visit them and it could be 50 years ago... I don’t think it has to be that way.”

**- Tom Duenwald,
Sammamish High School
Former Principal**