

# DESIGNING FOR INNOVATION

renovations and additions to complement a school campus





## executive summary

Established in 1991, Tarbut V'Torah is an existing K-12 community day school in Irvine, CA. This project expands on the original school site, bringing the facilities in-line with today's educational and instructional needs.

The original lower school (grades K-5) was progressively designed for its time, but an educational visioning process determined that in addition to fresh finishes and more flexible furniture, the school could use an addition to support an emerging "maker" culture and STEAM curriculum, and more opportunities for outdoor learning.

Just prior to this, the school asked to provide a renovation of the existing playground into an interactive learning environment. By extending the function of the classroom outdoors, students have access to a new amphitheater, growing gardens and farm, outdoor art space, interactive creek and new play structures selected to promote health and learning.

Divided into three topographical levels, the school is broken down by grade levels K-5, 6-8, and 9-12. Originally sharing resources like the Gymnasium, The upper school (middle and high) were lacking in areas of ownership and an additional fitness space was added to support the whole-student's health and wellness, as well as give upper school students a sense of ownership and identity.

A future phase was identified to support the upper school's collaborative, integrated STEAM curriculum on a larger scale – similar to the maker building, but with added specificity resulting from the school's unique needs, including a blackbox, digital media lab, and editing suites to support the robust film production program.



"How can we advance an emerging STEAM curriculum and enhance a collaborative culture?"



## scope of work & budget

59,027 SF modernization  
10,585 SF addition Maker & Fitness  
21.5 Acre Site  
2 Story Campus  
850 Students (K-12)  
\$20M Construction Budget

- ① administration
- ② primary school – minor renovation
- ③ renovation of music building
- ④ gymnasium
- ⑤ new fitness building
- ⑥ new maker + science building
- ⑦ library / MPR renovation
- ⑧ upper school building
- ⑨ student union
- ⑩ new STEAM high school building
- ⑪ new Israeli Discovery playground
- ⑫ community center

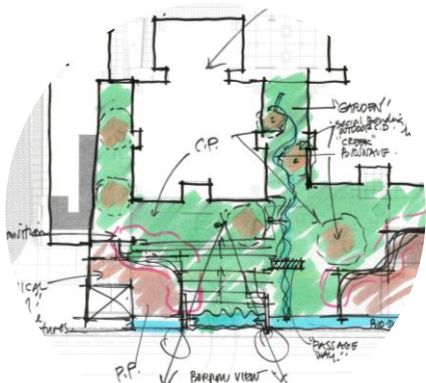




timeline



TvT opens the K-5 lower school campus



planning begins for playground re-imagination

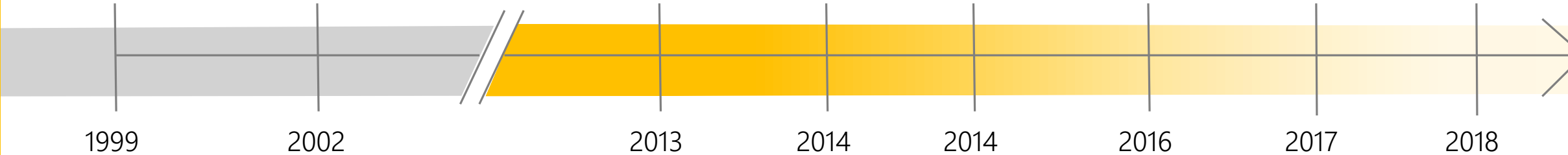


Israeli Discovery playground opens



Modernizations ongoing, learning spaces prioritized

New Innovation Center opens



1999- TvT opens K-5

2014- playground opens

2016- modernizations ongoing

2017- Innovation Center opens



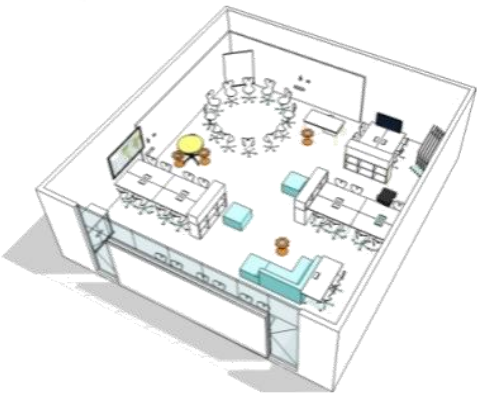
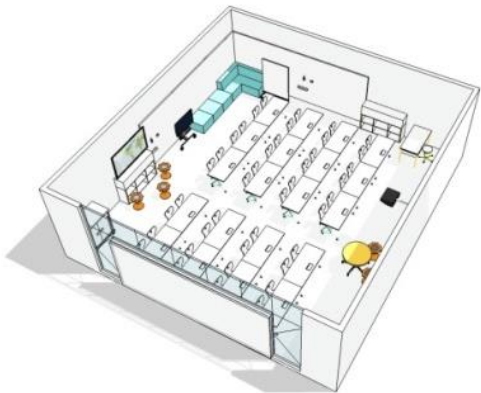
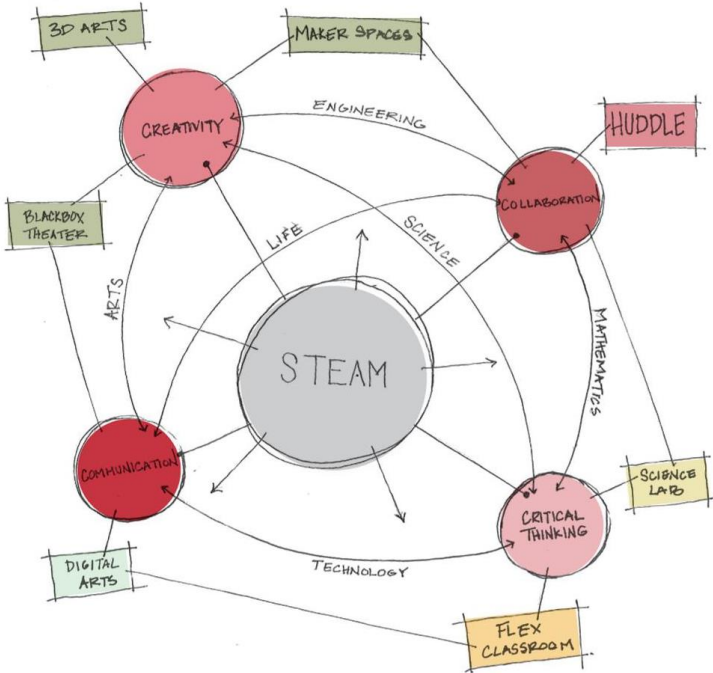
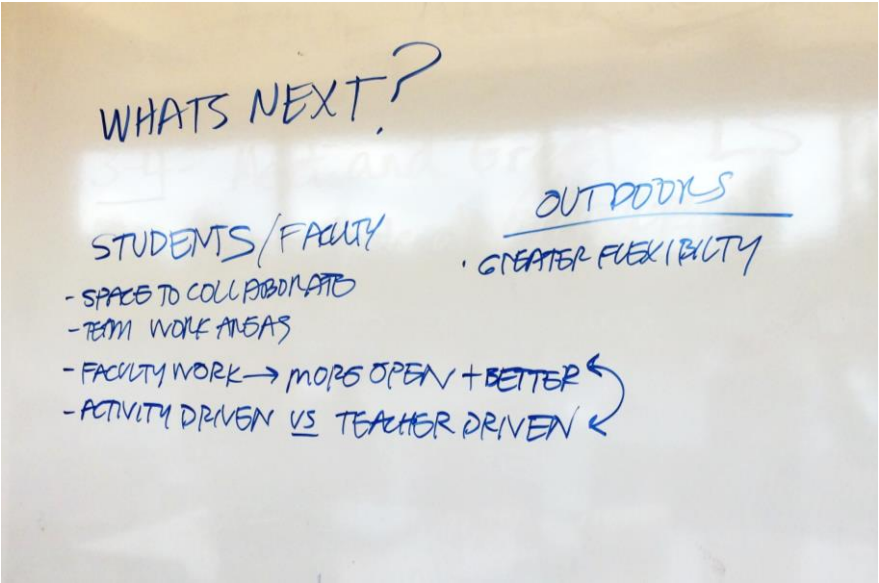


# school & community engagement

The school community is an inclusive, pluralistic community with students from 115 different feeder schools and 33 different cities/communities within Orange County.

A steering committee that included school leadership from the board, the head of school, upper and lower school principals and many educators began by taking a step back from discussing spatial needs and looking at educational visioning... not just how to supplement what they were already doing, but how to grow their school culture to become even greater than before.

Tradition is important to many schools, especially those with a rich cultural history to pass down to future generations. The challenge for these educators was to honor their cultural traditions while breaking away from a more traditional model of education, to being more collaborative and personalizing learning for every student. In order to achieve their goal of personalized learning, teachers realized that their space should be activity driven, rather than teacher-driven.



TRADITIONAL

COLLABORATIVE

PERSONALIZED  
LEARNING



## school & community engagement

Students and teachers were brought in to design charrettes to weigh in on active learning furniture, colors and finishes, and to help design the outdoor play spaces. Being an independent school and a close-knit community, the school community was accessible and provided many opportunities for input. Being able to experience a variety of samples of furniture at one location helped teachers to visualize their rooms with multiple settings and activities concurring at once.



## visioning exercises



## furniture fair



## educational environment

### Jewish values

TvT believes that “joyful learning today leads to meaningful achievements tomorrow” and the goal is to provide personalized education to each child, encouraging strong teacher-student relationships and emphasizing character attributes and service to the community as part of their values:

**Truth (Emmet)**

**Respect (Kavod)**

**Kindness (Chesed)**

**Repair the World (Tikkun Olam)**

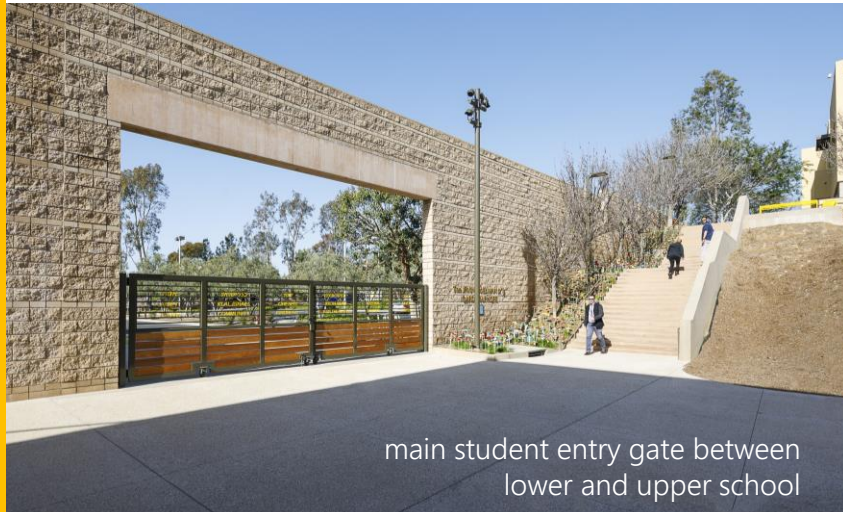
**Justice (Tzedek)**

**Community (Klal Israel)**

### project-based learning

Project-based learning is integrated into all levels at TvT – beginning in first grade and continuing through service learning projects and Afterschool Innovation programs that provide specialized areas of focus for interested students in subjects like AI, robotics, biomedical engineering, and interactive arts.

The new Innovation Center supports all of these programs, and is flexible to allow for new focused programs to emerge and evolve over time.



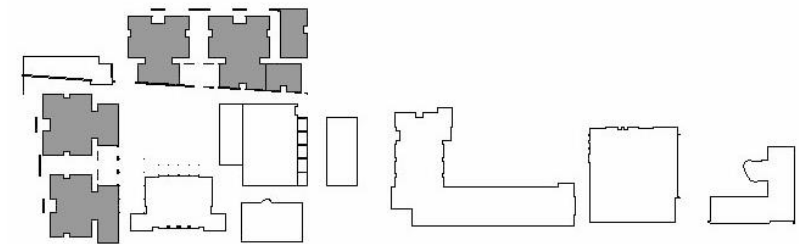
main student entry gate between  
lower and upper school







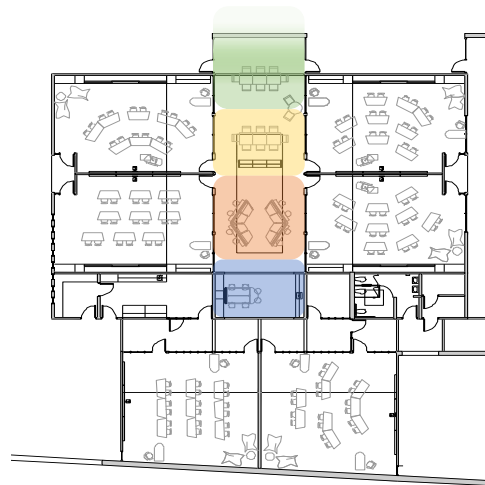
The commons between classrooms in the villages were previously designed with daylight, transparency and access to the outdoors. A new cultural shift has been supported through new furniture that augments collaboration and attracts teachers and students. Color theming for each village supports wayfinding through the campus.







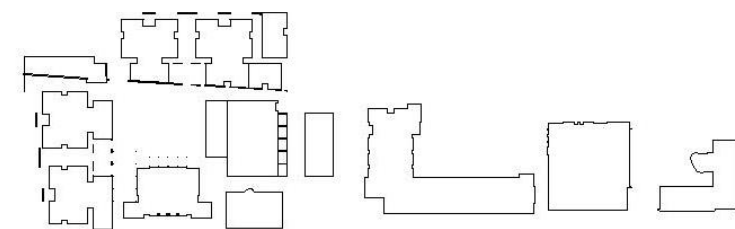
The commons furniture was custom-designed to support differentiated instruction, after many discussions with the teachers and search for the perfect piece. The resulting design is scaled to fit the size of younger children and allow for four areas of activity within each Village commons, with areas for both active groups and individual focused learning.







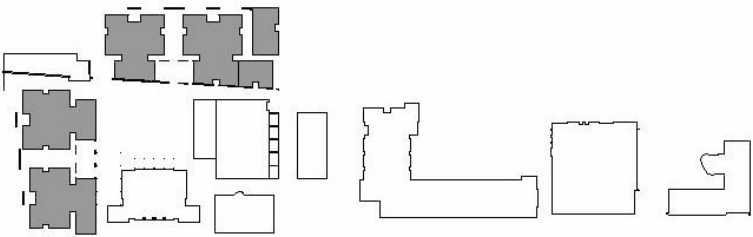
The lower school village classrooms had an existing structure and transparency that would support collaboration, but teachers had been using the space in a more traditional way – with paper and artwork covering nearly every surface. A leadership initiative to encourage more collaboration and new furniture that allows for kid-friendly movement and ownership has generated beneficial change beyond finish updates.







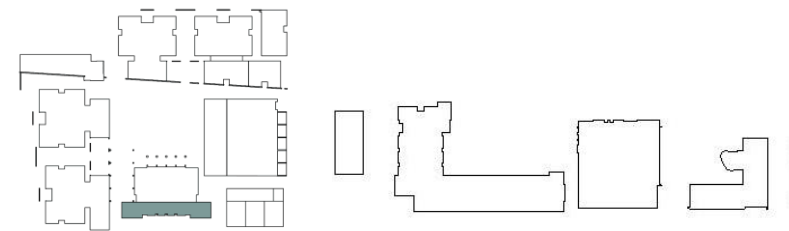
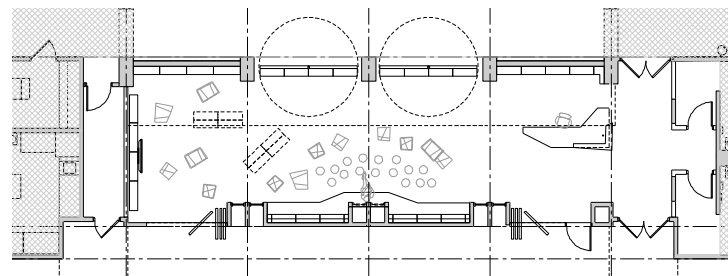
Bright accent colors in finishes and furniture help elicit joyful learning. New furniture supports a wide range of activity and allows students choice in their learning environment.







Strategic interventions into existing space allow for expanded student access; here, a series of under-utilized storage bays were converted into a permanent children's library – with a rotating bookshelf entry access from the MPR gathering space to delight and spark a sense of wonder.

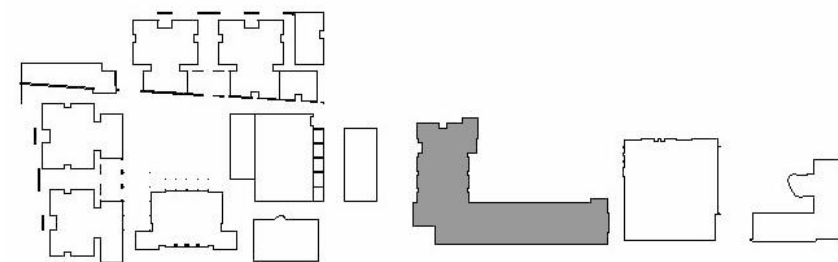






Tom Keene, LA Digital Photo

Upper School Classrooms had adequate space and storage; minimal renovation was required. Fresh finishes and new furniture that supports student movement and active learning have transformed these spaces, making a monumental improvement to the student experience.





## physical environment

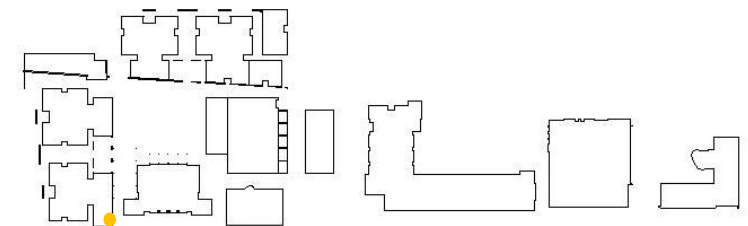


With the city's entitlement for the existing campus limiting new square footage, targeted renovations of under-utilized existing spaces were made to support more hands-on student learning.

This space, formerly a mostly-vacant staff lounge space, was converted into a Kosher teaching kitchen, where students can learn to bake challah bread or cook shakshuka. Double ranges, refrigerators, and color-coded countertops help maintain a Kosher environment.

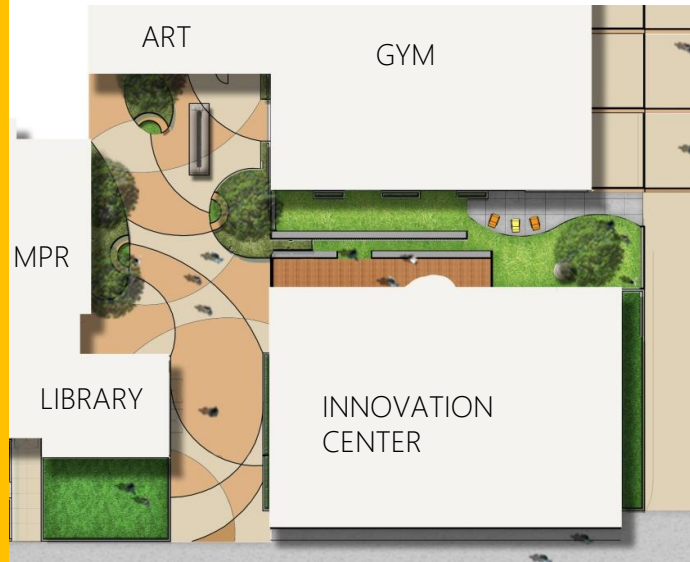


Stepstool benches were designed to help the youngest children reach the cooking surfaces and nest under the sides when not in use.

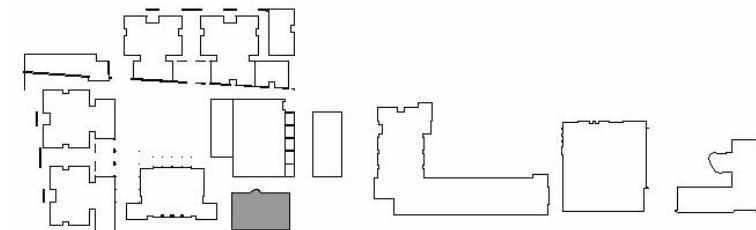




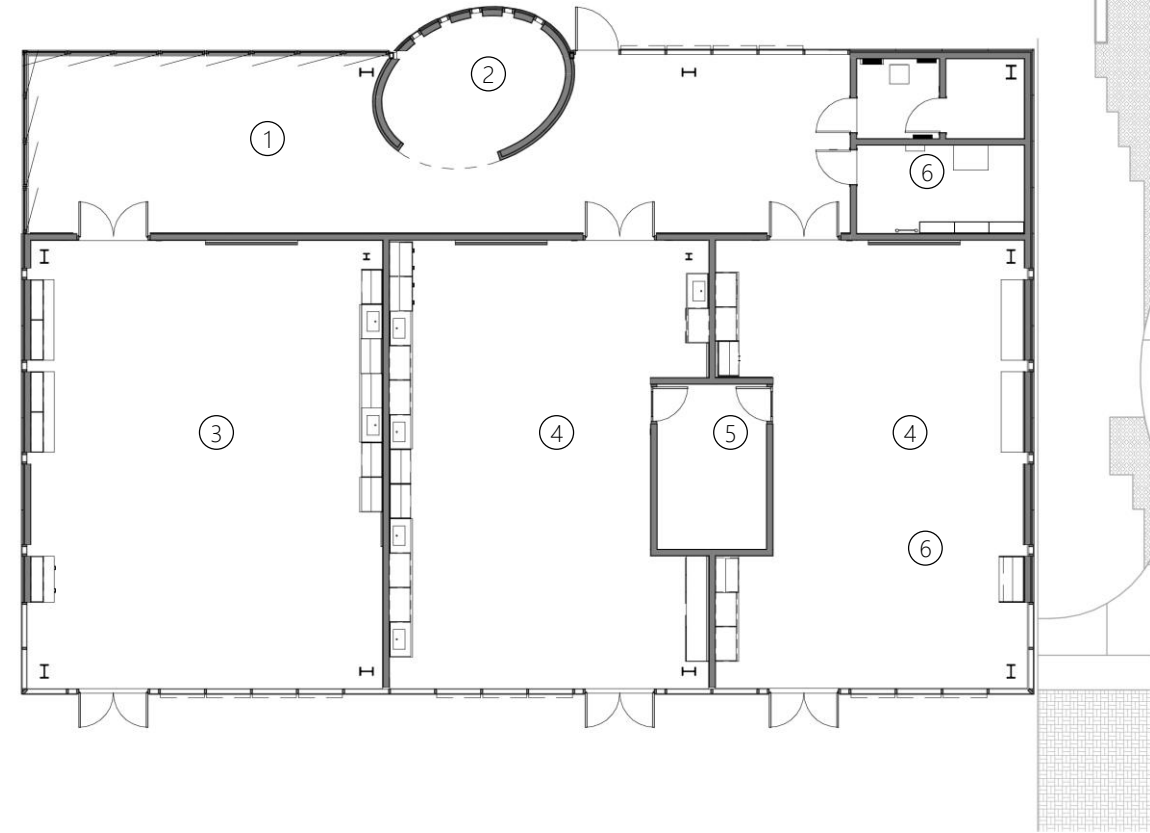
## physical environment – new additions



To encourage more interdisciplinary collaboration, the new STEAM / MAKER building, named the “Innovation Center” is sited next to the existing Art room and MPR, with an operable wall to expand learning space outside. An Arts courtyard was created to connect the two spaces and provide places for project display and group discussion.







## physical environment

A “Huddle” room is provided adjacent to all three lab spaces, providing a more acoustically-absorptive environment appropriately scaled for small group discussions or brainstorming. The curvilinear shape encourages out-of-the-box thinking and a positive group dynamic.

- ① breakout
- ② huddle area
- ③ imagination station
- ④ science/STEAM lab
- ⑤ storage/ workroom
- ⑥ building support





The maker and STEM lab spaces were designed to support an evolving curriculum and messy project-based creative explorations: including polished concrete floors with overhead utilities and furniture that supports a variety of activity, along with ample visible storage of materials and finished work.







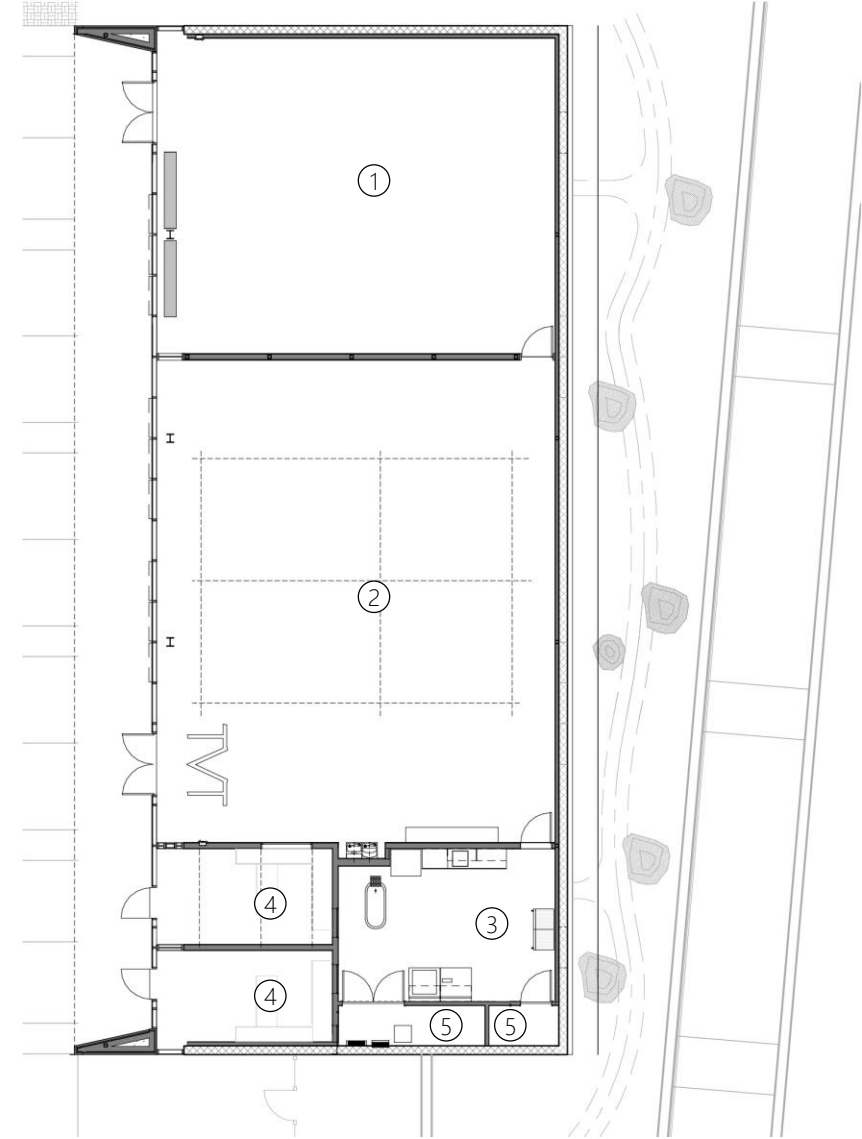
The architecture is open to allow for systems and utilities to be used as a teaching tool, with acoustical deck, tubular daylighting harvesters, a low velocity fan, and energy-efficient lighting. As much storage as possible is provided, with open shelving to spark ideas and curiosity. The height is scaled down through the use of color and the space comes to life through its occupants and work produced. For attention restoration, ample outdoor access and glazing provides views to the exterior, along with additional work space and operable windows for fresh air.







- ① dance / yoga studio
- ② weight room
- ③ training room
- ④ athletic office
- ⑤ building support



The new Fitness and Weight rooms provide additional resources for health and wellness, along with a sense of ownership and identity for upper school students who previously only had the shared gymnasium with lower school.







A green roof over the new fitness building blends it into the slope which separates the lower school from the upper school. The backside of the gymnasium building, formerly all handball courts, has provided additional storage space and large-scale graphics activate the main student entry.





## physical environment – outdoors



The birth of the Israeli Discovery Playground transformed what was once an outdated, cookie-cutter playground with excessive hardscape into a series of diverse spaces designed to be both learning space and play zone. These spaces include an art room with outdoor sink and 18' long family-style concrete table, a market stall along the tricycle path, an amphitheater for large group gathering, an interactive creek bed with water pump, growing gardens, and child-sized reading huts that can transform into Sukkots during religious festivals.





Sitting amongst the landscape is an outdoor classroom with a writable wall surface, boulders for seating and a large sycamore tree for shade. The chalkboard, set low for accessibility to the young students, is used both as a teaching tool and a play surface.

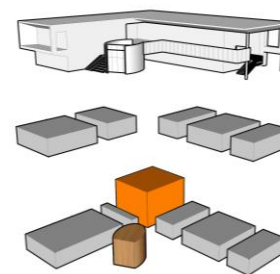
During the Feast of Booths holiday, the Reading Pods are converted into sukkot when the children weave them with palm fronds, allowing for both traditional instruction and religious celebration to occur in one space







The new upper school STEAM building, set to open this fall, houses hands-on learning labs and specialized programs: an engineering lab, an unscheduled maker lab, black box studio for film production, film editing bays, digital media and an art studio along with a Physics lab. The lab spaces are complemented by a think tank “huddle space” where students will present and pitch ideas.





## results of the process & project

Graphics have been added throughout each phase to inspire curiosity or connect students to history and culture. Inspirational quotes are throughout as well as symbols representing subject matter to explore, and a sandblasted and painted timeline of Jewish history runs through the back of the new Innovation Center.





## results of the process & project

After the completed playground project, renovations of the academic spaces, and the maker and fitness addition, school enrollment has increased with the largest ever Kindergarten class starting this year. Parents, students, and teachers can be found using the playground and garden after hours. The innovation center is home to many afterschool programs, and often opened up to the outdoor courtyard.

The renovations have been so successful, additional areas of the upper school campus have been identified to be renovated and the addition of the upper campus STEAM building is set to open this school year.

The spaces exemplify the school's values and are homes of **JOYFUL LEARNING**.

