



LIBERATORY PROJECT-BASED LEARNING

High Tech High

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The liberatory project-based learning model at High Tech High consists of authentic, collaborative, hands-on experiences that help students develop the deeper learning competencies needed in life.

OVERVIEW

The liberatory project-based learning (LPBL) model at High Tech High (HTH) evolved from the belief that students should be actively engaged with ideas and creating new knowledge versus being passive consumers of information. By positioning students as the central agents in their education, LPBL serves as a vehicle for deeper learning that hones relevant academic, civic, and life skills and dispositions. The deeper learning experiences are intentionally created for and with students, so they can develop an expanding sense of identity and an expanded ability to pursue questions of importance with others.



As an equity-driven organization, HTH believes that students should have access to meaningful learning and engage in projects that matter to them in a context of a loving community. [Equal Opportunity for Deeper Learning](#) The engagement in projects driven by questions that students generate is liberatory PBL—a liberation from constructs about school where learning only happens with books and the primary source of information is the teacher. Instead, it challenges the roles of teacher and student and thinks of disciplines as lenses to see the world. This work is driven by Paulo Freire's philosophy that one needs to understand the full truth of one's own reality, resist dominant narratives, and reclaim one's true identity.

As an organization that is constantly reflecting and learning, the transformation of HTH has grown to include a network of charter schools, a teacher certification program, and a graduate school of education. This allows HTH insights into emerging questions about its unique approach to Liberatory PBL and the impact on the lives of its students. [▶Innovative Teaching and Learning: Lessons from High Tech High's Founding Principal](#)

What Makes This Model Innovative?



High Expectations with Unlimited Opportunities

Craftsmanship is a core focus in all student work. From early ideas to final products, students refine their work using a structured critique and revision process. This allows all students to design, produce, and exhibit beautiful work.



Rigorous Learning

The rigor of LPBL at HTH stems from the deep engagement with complexity that students experience while working collaboratively in relevant interdisciplinary contexts. The open-ended nature of HTH projects invites students to think creatively, be curious, and act with agency.



Active Self-Direction

The authenticity within HTH project design gives students the power to make important decisions in their work. Projects are co-designed as opportunities for students to think creatively and give voice to their understanding of themselves and the world.

DESIGN

Goals

LPBL at HTH helps prepare a diverse population of students to feel and act, to speak truth to power, to love and know oneself, and to have a standing in the community. The hope that students have an enlarged sense of their identity to understand their past, their present, and their possible futures is done through a framework of critical reflection utilizing student-driven questions. This cultivates the dispositions and skills that students need to navigate a volatile, uncertain, complex, and ambiguous world. [▶HTH Project Design](#)

Master Core Academic Content

Students develop a baseline understanding of knowledge in core academic disciplines and are able to transfer knowledge to other situations.

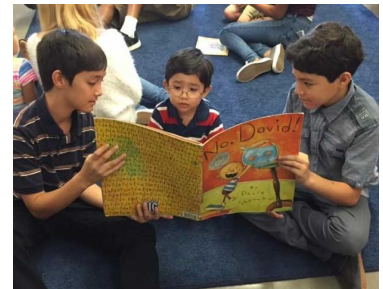
Think Critically & Solve Complex Problems

Students consider a variety of approaches to understand and address complex questions that are authentic and important to their communities.

Work Collaboratively	Students co-design projects with peers, exercise shared decision-making, strengthen relational agency, resolve conflict, and assume leadership roles.
Communicate Effectively	Students organize their thoughts to communicate with empathy and clarity when sharing their learning in writing and presentations.
Learn How to Learn	Students use teacher and peer feedback and self-reflection to monitor and direct their own learning while building self-knowledge both in and out of the classroom.
Develop Academic Mindsets	Students engage in critical reflection and action to increase self-efficacy and develop positive beliefs about themselves as learners.
Build Critical Consciousness	Students identify, critique, and challenge the social forces that produce inequity and oppression and take thoughtful democratic action.

Experience

LPBL at HTH is guided by four connected design principles that serve as the foundation of the larger organization: equity, personalization, authentic work, and collaborative design. As its guiding pedagogy, LPBL at HTH is unique in how it situates a diverse population of students in real-world contexts, with the belief that learning is more meaningful when shared with others through connections with the world beyond school.



PBL Practices

 Project Launch	 Essential Questions	 Ideation
 Critique	 Academic Skills, Content, And Dispositions	 Drafting And Revision
 Exhibition	 Assessment	 Reflection

LPBL at HTH has evolved to equip students with a critically conscious lens to identify, critique, and challenge the forces that reproduce inequity and its lingering impact on self, society and the planet.

Using their life experience as text is one part of how HTH helps students reclaim their identities and insert them into projects. The dialogue that occurs amongst students and their teachers drives the experience of learning. Another part of this involves the remixing of roles, so that teachers are students and students are teachers and relationships are centered in the learning process. [▶ HTH Design Principles](#) [▶ PBL Essentials Design Kit](#)

LPBL at HTH follows a nine-part process from Project Launch to Reflection.

Project Launch

Students and teachers participate in an engaging, active, shared experience in an authentic context with multiple entry points for diverse learners that invite varied perspectives and foster multifaceted, innovative thinking. This field work experience might be an interview with experts or community members, a visit to a museum, community service, or a site visit. These shared experiences create opportunity and access for every student to connect projects to some part of their identity and personal growth. [📄 HTH Field Trip Planning Document](#)

Essential Questions

To create additional entry points into projects, students work with teachers to generate and consider essential questions relevant to academia, students' lives, and the world beyond school, expressed in student-friendly language. These open-ended questions encourage multidisciplinary thinking, critical inquiry, and rigorous reflection where students are able to freely explore diversity of thought and alternative answers. Over time, this step within LPBL will help students produce high quality work that matters to them, their teachers, and people outside of school. [📄 HTH Sample Essential Questions](#)

Ideation

Students and teachers collaborate to generate and share unique and meaningful ideas in response to authentic questions that drive project design and deeper learning.

During ideation processes within LPBL, the use of protocols helps student teams tap into their collective creativity and innovation by allowing every member of a team to contribute. To add to the strength of teams, students are intentionally grouped with peers from widely different backgrounds, so that diverse perspectives drive the iteration of projects. The result is a composite of ideas, plans, and suggestions generated through collaboration. [📄 HTH Yes, And... Ideation Protocol](#)

Critique

Students and teachers use structures to analyze work samples for meaning, unpack the principles that contribute to their effectiveness, and identify important learning targets.

Students also learn processes and protocols to help them navigate the critique and instruction that inform the iteration within high-quality LPBL. To facilitate this learning with equity, critique is integrated as a practice in school culture, so that all students can find success and challenge in their learning. [📄 HTH 15 Minute Student Project Tuning Protocol](#) ▶ [Project Tuning](#)

Academic Skills, Content, and Dispositions

Students and teachers collaborate to understand and apply core academic skills and content, and develop positive academic dispositions. Students learn to ask and address complex

questions, apply skills and content in dynamic contexts, and develop academic mindsets.

Projects integrate hands and minds and incorporate inquiry across multiple disciplines, leading to the creation of meaningful and beautiful work. Students engage in work that matters to them, to their teachers, and to the world outside of school. Students connect their studies to themselves and the world through fieldwork, community service, internships, and consultation with outside experts. [▶ HTH Academics - Experience as Text](#)

Drafting and Revision

Students and teachers generate multiple iterations of their work informed by critique, models, or instruction, in a trajectory towards increasingly meaningful and beautiful work.

Organized and structured drafting and project revision processes create opportunities for all students to find moments of access and challenge in their learning. All students and teachers pursue deeper learning through multiple iterations of their work. [📄 HTH Kind, Specific, and Helpful Critique](#)

Exhibition

A highlight of LPBL at HTH is sharing student work in the “real world” with important community members. This fosters meaning by putting student work in the position of serving others. Displaying student work—whether as an open house, formal presentations, conferences, or by placing student work among authentic users—drives project-design processes and creates opportunities for authentic dialogical assessment. [📄 HTH Sample Presentation of Learning Rubric](#)

Assessment

Projects lend themselves to multiple forms of assessment, and assessment is informative, reflective, and collaborative. In LPBL, assessment practices are ongoing and dialogical, beginning with reflective self-assessment and incorporating both peer critique and expert consultation. [📄 HTH Self Assessment Template](#)

Reflection

As a part of LPBL, students and teachers look at their work and ask questions designed to foster thoughtful, deliberate practice. Both students and teachers engage in reflection to consider their growth and push their thinking. Reflective practices in education foster cycles of inquiry and frame the culture and values of the school and community. [📄 HTH Sample Year End Reflection](#)

Supporting Structures

Integrating the HTH LPBL model into a school requires fundamental shifts in instructional practices, school culture, adult learning, and use of space.



CURRICULUM, INSTRUCTION, & ASSESSMENT

LPBL can be incorporated into any curriculum that focuses on depth versus breadth in content coverage and supports critical examination of social issues.

Designing LPBL with critical pedagogy allows teachers to build a curriculum that has depth, relevance, and rigor. Interdisciplinary projects, a hallmark of HTH schools, are enabled by co-teaching and co-created classes. Adopting this structure for LPBL requires a commitment to critical pedagogy, less prescriptive curriculum, co-teaching, and deep relationships with students.

Assessments in the LPBL model include several interactive elements but are exemplified by public exhibitions, which are essential to the learning process. HTH students of all ages regularly deliver presentations of learning to peers, family, and the community at large. Additional elements of the assessment process include teacher-designed performance tasks, skills assessments, and student self-assessment tools like learning journals and student-led conferences. [High Tech High Student Projects](#)



SCHOOL COMMUNITY & CULTURE

The LPBL model calls for a culture of belonging created through a focus on collaboration and meaningful bonds.

Students engage in collaboration across almost every aspect of their experience within the model, particularly during projects. This collaboration and dialogue will typically be between students and their peers, but also between students and teachers, the school and families, and the school and the larger community. Developing a culture of collaboration requires schools to be purposeful and specific in teaching the skills to students.

To foster the development of collaboration skills at HTH, students are grouped heterogeneously and brought into projects as design partners by teachers. HTH teachers are situated as ethnographers of their students and facilitators of learning, and they themselves collaborate to design curriculum and projects with the goal of hosting equitable spaces where norms and protocols help students grow as collaborators and creators.

The emphasis on collaboration in the model is a part of the larger culture of belonging that students experience. Schools adopting LPBL must create structures for students to become known. HTH uses morning meetings, advisories, home visits, and student-led conferences to accomplish this.

To support the development of high-quality LPBL, teachers need daily shared planning time and a variety of professional development opportunities.



**ADULT ROLES, HIRING,
& LEARNING**

To support LPBL, HTH has reimagined faculty roles and workloads by using a team teaching model and dedicating time for faculty to collaborate several times a week. This is a major commitment for any school that wants to adopt this model. At HTH, shared teacher planning time may equate to 100 more hours annually than those of typical urban high school teachers. In addition to this, faculty meet weekly to discuss practice and address issues that arise in a teacher's day-to-day work and the greater community.

HTH believes that an interdisciplinary structure is an important component of its LPBL approach, which means that teachers may be called upon to teach more than one subject. Dual credentialing can support them to do this, but is not required. HTH also hires teachers who have experience outside the classroom, so that projects are more likely to have real-world applications.

To support the growth of LPBL in general, HTH has developed a variety of professional learning programs, including a teaching credential accredited by the California Commission on Teacher Credentialing and the HTH Graduate School of Education, which is embedded within its charter school network of innovative, project-based schools.



**SCHEDULE & USE OF
TIME**

To adopt HTH's model of LPBL, schools must create a schedule that gives students and teachers more time to delve into projects with a critical lens.

LPBL at HTH is structured around 90-minute class periods that give teachers and students the time to engage in thoughtful and thorough work. Teachers are able to be more responsive to individual student needs while students learn to be collaborators who understand the value of their own voice as well as that of others. Additional time allows students and teachers to focus on process rather than just the end product. [Sample Student Schedule](#)



SPACE & FACILITIES

To adopt the HTH LPBL model with fidelity, schools must have spaces where students can collaborate and common areas where artwork, prototypes, and other artifacts of student learning can be displayed.

HTH buildings are anchored by open spaces that serve as galleries for student work. A unique element of most HTH classrooms are the large interior-facing windows that extend the open feeling of the buildings. These windows also help to create an atmosphere of collective enterprise and belonging as well as norms for focus and public work.

School facilities are not generally designed with LPBL in mind, which is why HTH co-founder Larry Rosenstock once said, “I didn’t want a school where we were going to try to do things despite the architecture... People say, ‘This doesn’t look like a school... it feels like a startup, like an incubator...’ This [space] is designed to exhibit student work.” Schools that adopt this model may need to be creative in how they set up spaces for the completion and exhibition of student work. [▶ Project-Based Learning at HTH](#)



Unique features of the HTH LPBL model, like team teaching and an emphasis on technical skills, require a commitment in funding.

HTH has been intentional about building its curriculum around LPBL, and funding decisions have been a part of that process. Funding is a part of the commitment that a school must make if high-quality LPBL is the goal. High Tech High teachers have access to funding, so that student projects can be completed according to a budget.

IMPLEMENTATION

Supports Offered

[High Tech High](#) offers a variety of supports to help teachers and schools understand and adopt its model of LPBL.

Resources

Free



The HTH Graduate School of Education (GSE) has curated a wealth of free, project-based learning resources for teachers, school leaders, and school systems. This includes *Unboxed*, a journal through which HTH shares its approach to LPBL and learning. [▶ Unboxed](#)

[Access Now](#)

School Visits and Events

Cost Associated



HTH offers both curated in-person visits and free online interactive experiences to explore the LPBL model and HTH student experience.

HTH also hosts the Deeper Learning Conference, which expands how people think about education and provides tools to implement meaningful change. [▶ Deeper Learning Conference](#)

[Learn More](#)

Professional Development

Cost Associated



The HTH GSE offers a range of professional development that supports the implementation of LPBL and fuels change in education.

LPBL Design Camp is a cohort experience about the application of the design process to LPBL. The LPBL Leadership Academy supports teams of educators who create personalized leadership projects. Project Unpackings provide in-depth explorations of project design. HTH customized residencies can be facilitated online or in person.

[PBL Design Camp](#) [PBL Leadership Academy](#)

[Learn More](#)

Teacher Credentialing & Graduate School of Education

Cost Associated



The HTH GSE emerged from, and is fully embedded within, the HTH school network. It hosts residencies, conducts research, and offers two master's degrees in education. The HTH GSE is accredited by the Western Association of Schools and Colleges.

The HTH Teacher Center offers an Intern Program for preliminary teaching credentials and a two-year Induction Program for teachers with preliminary teaching credentials. The Teacher Center is authorized by the California Commission on Teacher Credentialing.

[Learn More](#)

School Redesign & Co-Design

Cost Associated



The Center for Love & Justice at the HTH GSE offers programs for the co-design and redesign of schools for love, justice and collective liberation.

The New School Creation Fellowship is designed for educators who are passionate and committed to designing and founding new schools focused on justice, equity, and deeper learning.



School Redesign partners the HTH GSE with existing schools and districts to advance equity for K-12 students through LPBL.

[Learn More](#)

Reach

In seeking to disrupt the norm of increasingly socioeconomically segregated schools across California, HTH schools seek equitable outcomes for all students and are intentionally integrated and diverse across a range of ethnicities, identities, social backgrounds, and life experience.

16

Schools

4

Campuses

6,350

Students

286

GSE Degrees
Awarded

Impact

LPBL at HTH positions students to tackle real-world problems and produce high-quality professional work.

- HTH student projects include insightful studies of local and global issues and reflect the quality one would expect to see in professional workplaces. [HTH Student Projects](#)
- HTH students have published dozens of books, including two with forewords written by E.O. Wilson and Jane Goodall. [HTH Student Publications](#)

HTH students are better prepared for postsecondary education.

- HTH students outperform their peers from the surrounding district, county, and state on the SAT and ACT.
- 56% of all students seamlessly enrolled in a 4-year college.
- 53% of students of color seamlessly enrolled in a 4-year college.

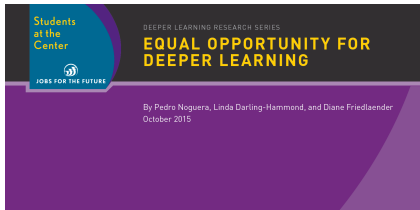
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RESOURCES

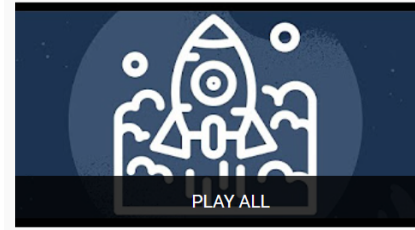


[Equal Opportunity for Deeper Learning](#) A report on the issue of equity in teaching and learning by Pedro Noguera, Linda Darling-Hammond, and Diane Friedlaender.



Innovative Teaching and Learning: Lessons from High Tech High's Founding Principal

[Innovative Teaching and Learning: Lessons from High Tech High's Founding Principal](#)
A video describing PBL at HTH.



HTH Project Design

[HTH Project Design](#) A collection of 9 videos that explain how to design projects.



High Tech High Design Principles

[High Tech High Design Principles](#)
A video explaining HTH's design principles.



[PBL Essential Design Kit](#)
A website describing various PBL practices.



Field Trip Planning Document

Before the first day of your project, do the following to set up a field trip. Remember: museums, parks, galleries and similar places are designed to engage a diverse audience from the community, and non-profits, community organizations, professionals, or experts are often accustomed to speaking with students or the broader community as they share their work.

By structuring a field trip very early in your project (maybe even day one!), you can mutually engage diverse learners in an authentic context, and create an equitable environment for complex academic work that stems from a common experience.

Approximately one month before your project begins

[HTH Field Trip Planning Document](#) A document to help plan field trips.



Sample Essential Questions—and Related Academic Content

The following Essential Questions are taken from projects in High Tech High K-12 schools and beyond.

Essential Question: Should I Eat That?
Biology, Psychology, Anatomy, History, Cultural & Religious Studies, English, Geography, Government, Economics, Math

Essential Question: What Does It Mean to Act Like a Girl?
Elementary school project into identity and gender norms.

Essential Question: Can We Control an Ecosystem?
Environmental Science, Engineering, Ecology, Physics, Chemistry

[HTH Sample Essential Questions](#) A collection of essential questions.



Yes, And...! Brainstorming Protocol

1. Group the class into teams of four to six participants (students, teachers, or a mix).
2. Review the norms:
 - Everyone participates
 - Go for quantity
 - Reserve judgement—in fact, we accept *all* ideas!
 - Build on each others' ideas
 - Say your ideas aloud as you write them
 - Have fun!

[HTH Yes, And... Ideation Protocol](#) A document explaining how to use a Yes, And... protocol for brainstorming.



FIFTEEN MINUTE PROJECT TUNING

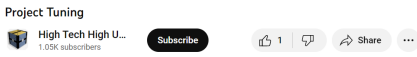
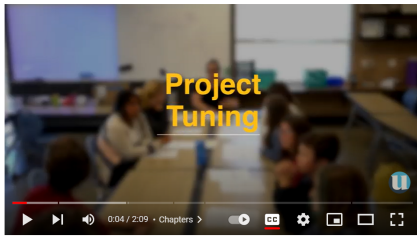
Norms:

- Hard on the content, soft on the people
- Be kind, helpful and specific
- Share the air (or "step up, step back")

Protocol: (~14 min per person. Arrange the students in groups of four; the teacher acts a class-wide facilitator and timekeeper. One goal can be for all students to have their ideas critiqued within a one-hour class period.)

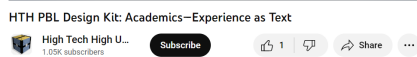
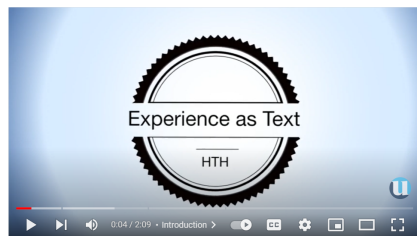
1. **Project Overview** (3 min): The presenter gives an *overview of their idea* and shares his/her thinking about key design issues. The presenter will likely share drafts, plans, or other artifacts to

[HTH 15-Minute Student Project Tuning Protocol](#)
A document explaining a process for students and teachers to tune a project.

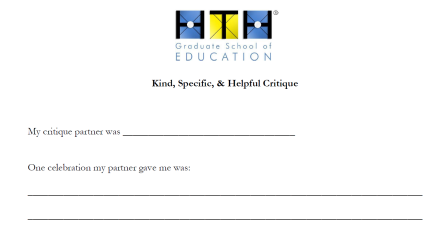


[Project Tuning](#)

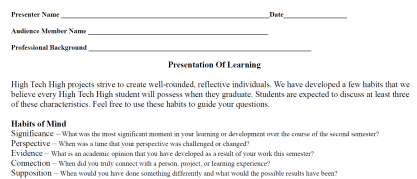
A video that demonstrates the steps of project tuning.



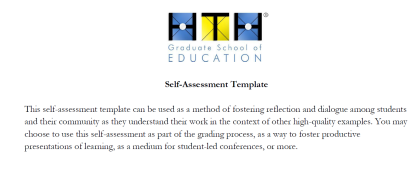
[HTH Academics - Experience as Text](#) A video explaining how student experience serves as a text for learning.



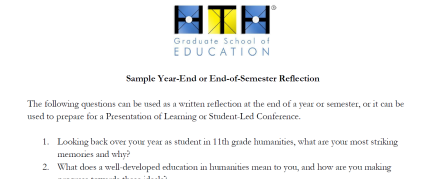
[HTH Kind, Specific, and Helpful Critique](#) A document that can be used to facilitate a critique.



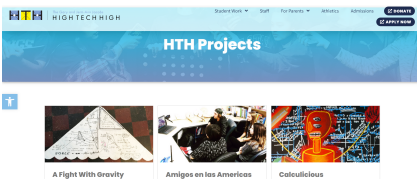
[HTH Sample Presentation of Learning Rubric](#) A rubric that can be used to assess student presentations of learning.



[HTH Self-Assessment Template](#) A document explaining the self assessment process for students.



[HTH Sample Year-End Reflection](#) A document to guide student reflection.



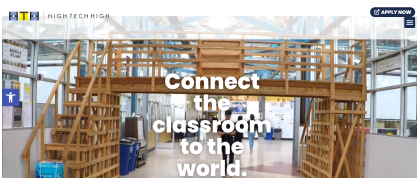
[High Tech High Student Projects](#) A large collection of HTH student projects.

	Monday	Tuesday	Wednesday	Thursday	Friday
Group A					
Period 1	Elective	Elective	Elective	Elective	Elective
Period 2	Humanities	Humanities	Humanities	Humanities	Humanities
Period 3	Humanities	Humanities	Humanities	Humanities	Humanities
Period 4	Math/Physics 1	Math/Physics 1	Math/Physics 1	Math/Physics 1	Math/Physics 1
Period 5	Math/Physics 1	Math/Physics 1	Math/Physics 1	Math/Physics 1	Math/Physics 1

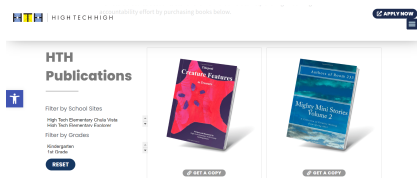
[HTH Sample Student Schedule](#) An illustration of a student schedule at HTH.



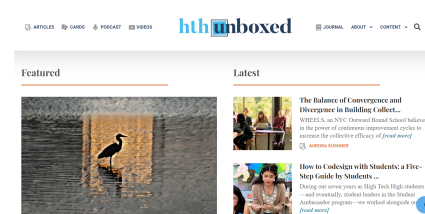
[Project-Based Learning at HTH](#) A video describing the importance of space in PBL.



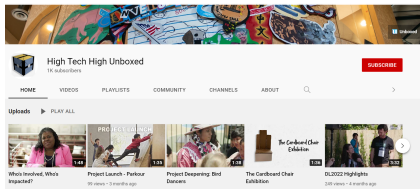
[High Tech High](#) The main HTH website.



[HTH Student Publications](#) A collection of the books published by HTH students.



[Unboxed](#) The website for HTH Graduate School of Education's journal of adult learning in schools.



[HTH Unboxed YouTube Channel](#) A collection of videos from the HTH Graduate School of Education.



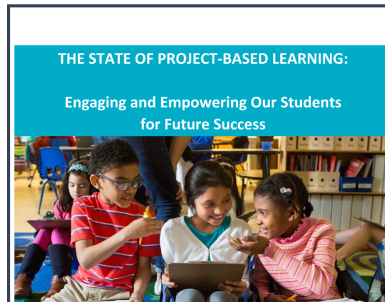
[Deeper Learning Conference](#) Information about the Deeper Learning Conference hosted at HTH.



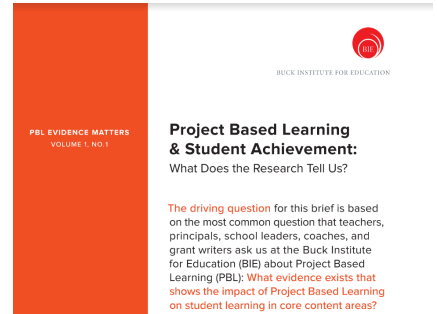
[PBL Design Camp](#) Information about HTH's PBL Design Camp.



[PBL Leadership Academy](#) Information about HTH's PBL Leadership Academy.



[The State of Project-Based Learning](#) Results from a large scale survey about PBL.



[Project-Based Learning & Student Achievement: What Does the Research Tell Us?](#) A study about the impact of PBL on student performance.