



INNOVATION DIPLOMA

Design Tech High School

The Design Tech Innovation Diploma uses the design thinking process to equip students with the tools and mindsets they need to explore personal purpose and address real-world challenges.

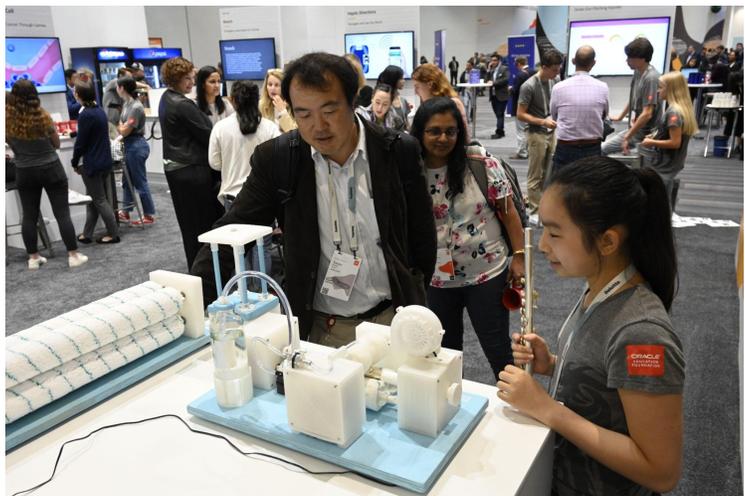
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OVERVIEW

The Innovation Diploma created by Design Tech High School (d.tech) is a unique opportunity for students to earn a specialized credential that represents their ability to apply design thinking skills to real-world challenges with efficacy. Design thinking is a problem-solving methodology used by designers, engineers, and entrepreneurs. In the Innovation Diploma (ID) model, design thinking helps students think about the future and use their imagination and intelligence to find a way to make the world better.

The focus of the ID model is an independent year-long project that addresses a significant challenge students see in their own community. Students choose the topic of their project based on personal interests. As they work on their projects, students gain hands-on experiences that help them become proficient with innovation mindsets, skills, and responsibilities such as initiative and persistence, project management and collaboration, and storytelling and self-awareness. Earning an ID prepares students to be innovative problem-solvers with a sense of social responsibility.



d.tech offers professional development and school visits for educators as a part of a growing network of schools offering an ID. They also offer direct programming for non-d.tech students who want to earn an Innovation Certificate. [▶ Design Thinking & The Innovation Diploma](#)

[📄 Innovation Diploma Program](#)

What Makes This Model Innovative?



Active Self-Direction

Students develop and complete Innovation Diploma projects independently. Empowered by design thinking, students find they have the agency and capacity to navigate big projects.



Relevance

Student interests and identities dictate the focus of Innovation Diploma projects. Students are also required to build their projects around community engagement or community action.



Social Consciousness & Action

Focus on a need students see in their own communities is core to the Innovation Diploma. The awareness and skills that students develop during their ID projects help them make positive contributions to the world throughout their lives.

DESIGN

Goals

The d.tech Innovation Diploma uses design thinking mindsets to unlock each student's potential as a learner who can take action to make the world a better place.

Self-Aware Changemakers	Students consciously and conscientiously consider the potential contexts and impact of their actions in the world.
Responsible Creators	Students manage tasks and projects with initiative and use inclusive processes to develop solutions with awareness of ethical implications.
Inspired Storytellers	Students use curiosity and creativity to inform how they share their work and generate connection and support for their efforts.
Competent Collaborators	Students work to build community using culturally competent practices to promote diversity as a part of effective teamwork.
Self-Directed Learners	Students independently organize and navigate their own learning and persist when faced with obstacles.

Experience

The Innovation Diploma model positions students to apply their design thinking skills to a community issue that they choose as the focus of their project. As they self-direct their way through their projects, students develop competencies and skills that they will be able to apply in their postsecondary lives. Students demonstrate the depth of their learning when they present and defend their projects at the end of the year. [▶Innovation Diploma Program Overview](#)

As the foundation for the work they do in the ID program, the design thinking process helps students build greater capacity for innovative and creative problem-solving. By learning how to develop ideas, create and test prototypes, and pitch solutions, students who earn an ID have a realistic idea of how to apply design thinking in real-world contexts. [📄Innovation Diploma Curriculum Sample Module](#)

The following are key components of the d.tech Innovation Diploma experience:

Explore, Create, Learn

Students use a three-part design thinking framework to navigate their d.tech ID projects.

Explore

During the Explore phase of their ID projects, students conduct research and interviews to generate empathy and uncover the needs and motivations of the people closest to the problem they have chosen to work on. Students gather multiple perspectives from a variety of sources to gain a nuanced understanding of the issues at hand, so that their solutions are more likely to be effective.



Using ethnographically informed methods, students analyze the range of factors that may be influencing the problem. By using a holistic approach to problem-solving, students learn to address the underlying causes of problems rather than just treating the symptoms.

Create

During the Create phase of their ID projects, students brainstorm a wide range of ideas to develop multiple potential solutions to the problem they are working on. Students use different methods of brainstorming to generate creative and innovative ideas that might help address the problem. Students use these ideas to create and test low-investment prototypes, so they can identify strengths and weaknesses in potential solutions and make adjustments.

Experimentation is inherent to this phase because students must engage a beginner's mindset and test ideas to find innovative solutions. Testing helps students overcome their biases and assumptions and builds their creative confidence because they learn that taking a risk to do something differently often leads to insight. This lesson, along with thinking from different

perspectives, helps ID students approach their projects with an open and inclusive process that yields greater possibilities for innovative solutions.

Learn

During the Learn phase of their ID projects, students engage in an iterative process that is grounded in what they have learned through testing and reflection. By reflecting on their design process and noticing the biases that influenced their decision-making, students gain skills that will be valuable throughout their lives. This also ensures that students are refining and improving their solutions to effectively meet the needs of the people facing the problem. This also helps students develop solutions that are sustainable and valid in the real world.

Because the ultimate goal of an ID project is for a student to learn how to be an innovative problem-solver, metacognition is a critical component of the learning cycle. Successful ID students learn the importance of being humble and curious so they can learn from their mistakes and recognize areas for improvement. This self-awareness and growth can typically be seen in the overall evolution of the project as explained by a student during design reviews and the formal oral defense at the end of the project.

Design Review + ID Project Defense

As students work on ID projects, their progress is evaluated and critiqued during three design reviews that are conducted by panels of students and adults. The focus of these reviews is evidence of competency, not a checklist. Instead, ID reviews are structured as demonstrations of learning.

Design Review

During the first design review, students present what they have learned during the Explore phase of their project. This review assesses research, insights into stakeholders, and clarity regarding the problem being addressed in the project. The second design review focuses on the prototyping that students have done during the Create phase of their project. The final design review focuses on the insights that students have developed through testing and iteration during the Learn phase of their projects.

During each design review, students must demonstrate that diverse stakeholders, especially historically marginalized groups, inform their design work, which will be audited for inclusion and justice at the end of the process. [📄 Design Review Facilitator Guide](#) [📄 Design Review Rubric](#)

ID Project Defense

The process of earning an ID concludes with a student presentation and oral defense of their project. This is the student's opportunity to demonstrate to a faculty panel what they have learned during their project along with the skills they have developed.

Students must exhibit competency in five areas by producing a written narrative and making a 5–7 minute presentation that addresses the question: Can you be an innovator? During the

presentation, students must also speak to the focus, methodology, and outcomes of the project while defending the three core design competency areas: Explore, Create, and Learn. They do this by telling the story of their project and by providing evidence that they know how to apply creative problem-solving skills. In addition, students must demonstrate competencies that align to ID program goals. This is where students highlight specific strengths they have as ethical, collaborative, and self-directed creators. [d.tech Oral Defense Preparation](#) [d.tech ID Outcomes](#)

Supporting Structures

The emphasis on design thinking in the Innovation Diploma model requires alignment of principles and practices across the entire school program. Schools interested in the model must be willing to make significant changes to their structures, particularly in curriculum and instruction.



CURRICULUM, INSTRUCTION, & ASSESSMENT

Extensive use of design thinking across the curriculum supports the Innovation Diploma model.

Design thinking is incorporated into almost every facet of d.tech curriculum. Schools offering ID must make a similar commitment to using project-based instruction and assessment methods, so that ID students can actively apply design thinking skills to authentic challenges. They must also implement project-based learning to give students the opportunity to apply their design thinking skills to challenges they care about. Assessments should be structured as opportunities for students to iterate and build competencies using feedback from peers and teachers. [d.tech Design Thinking Playbook](#) ▶ [Learning by Design: How d.tech Uses Research](#)



SCHOOL COMMUNITY & CULTURE

The d.tech Innovation Diploma model relies on a community and culture that supports creativity and collaboration in student work.

To build a community that supports students who pursue the ID, schools must work to create a culture of empathy, trust, and commitment. This culture helps students feel more comfortable as they take the creative risks necessary to earn the unique credential. It also helps students engage in more meaningful and productive collaboration.

Structures like advisory programs can help schools build the culture needed to support ID because they help students build trust and empathy through familiarity and belonging. At d.tech, having an advisor and advisory peers as allies while pursuing an ID offers important validation to students.

To cultivate self-direction and independence, adults must give students the space and support to learn how to learn.



**ADULT ROLES, HIRING,
& LEARNING**

Because design thinking structures the path to the ID, student agency plays a big role throughout the process. To support this, teachers must act as facilitators, coaching students through their ID projects and providing very little direct instruction. This also lends itself to the d.tech philosophy that teachers assign “coursework” rather than “homework” to motivate students to be productive during class.

Schools adopting this model must create space for students to navigate ambiguity and learn from failure and feedback. This means that teachers must rethink their roles and grow accustomed to guiding rather than leading in the classroom. Making this shift may require schools to support their teachers with professional development.

The Innovation Diploma requires a daily schedule that allows students to work along personalized paths.



**SCHEDULE & USE OF
TIME**

Schools offering ID need to support students with a schedule that ensures that earning the credential is not an overwhelming addition to their workloads. Ideally, students will have 2–5 predictable and dedicated hours in their weekly schedule to work on their project. At d.tech, each day includes a flex period when students can study and work on projects.

Students at d.tech can also work with advisors to co-create portions of their schedules. Students are required to be at school throughout the day, but the time they spend in each of their classes varies according to their individual learning needs. The extra time outside of a class allows students to work on projects or complete coursework, so that they will have less work after school. [d.tech Daily Schedule](#)

Strong community partnerships extend the opportunities that students have in developing their Innovation Diploma projects.



**FAMILY & COMMUNITY
PARTNERSHIPS**

Being located on the Oracle campus gives d.tech high school a unique position in the world of public-private community partnerships. Although partnering with a major corporation is not necessary, schools adopting the d.tech ID model should create community and industry partnerships to offer a range of opportunities to support student projects with expertise and mentorship.

Volunteers from the larger community can also play a role in supporting ID projects. Because students choose their own topics, a wide range of expertise may be needed to support projects. To support students working

toward ID, schools adopting the model should actively network with professionals who can provide students with insight and mentorship.

Schools adopting the ID model need to provide a space for students to prototype and build ideas.



One of the central spaces at d.tech is the Design Realization Garage (DRG), where students prototype design ideas and create visual representations of their thinking. The DRG is an 8,000 square foot, two-story fabrication lab. It is where d.tech students develop maker skills, build things to better understand lessons in the core curriculum, and conduct rapid prototyping for projects.

SPACE & FACILITIES

Because not all schools will have the funding or space needed to build something like the DRG, d.tech has outlined a basic list of resources that should be a part of an ID program. Having the opportunity to physically prototype and build ideas that grow out of imagination is an essential step in the ID learning process. [📄 Innovation Diploma Classroom Maker Kit](#)

IMPLEMENTATION

Supports Offered

Design Tech offers the following supports to help you implement their [Innovation Diploma](#) model.

ID School Network

Cost Associated



Schools interested in bringing the ID model to their school can join the Innovation Diploma Network Schools. All schools in the network receive:

- Design Thinking Curriculum: Scaffolded modules with activities for students and resources for teachers.
- Professional Development: Workshops and check-ins to support teachers in implementing the curriculum.
- Student Creativity Building: Students' work is evaluated in part by d.tech ID team members.
- Support in Developing External Partnerships: Design Tech will leverage its network to help schools develop partnerships.

[Express Interest](#)

Innovation Credential for Students

Cost Associated

Students who do not attend Design Tech or an Innovation Diploma Network School can earn a d.tech Innovation Credential through a one-year course. For 10th and 11th grade students (9th graders, if room allows), this is an opportunity to learn design thinking and apply it to challenging problems they care about. Students who



successfully complete the course earn the Innovation Credential and are offered a 4-week summer pre-internship.

[Express Interest](#)

School Visit

Free

To learn more about the Innovation Diploma, you can visit the Design Tech High School campus in Redwood City, California.



[Express Interest](#)

Reach

5+

ID Network
Schools

29

IDs Earned
by Students

45%

ID Students
of Color

57%

Female ID
Students

Impact

ID students develop competencies that are validated by both industry professionals and college admission results.

- 100% of ID students have demonstrated competency in creative problem solving, leadership, and taking initiative.
- The acceptance rate for ID students at University of California schools is 6% higher than that of the local high school.

Professionals and professors say the d.tech ID strengthens student profiles:

- *"The Innovation Diploma is a significant level of challenge for even the most ambitious student; however, it should not be the case that only top students are allowed to pursue it. The Diploma represents a way of thinking that can improve any student's mindset for all academic and work challenges."* – Industry professional
- *"This level of analysis by a high school graduate would be a distinguishing characteristic in applying to highly selective colleges and universities. Few existing co-curricular/extracurricular programs offer this kind of challenge and positive outcome."* – University professor
- *"These examples of advanced research are not typically done by high school students. If a high school student came in with a Proficient Level, then I think they would be exceeding expectations"*

for entry to higher ed or post-secondary training in a career field that involves designing solutions.” – University professor

Contact

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RESOURCES



[Design Thinking & The Innovation Diploma](#)

A video about the Innovation Diploma at Design Tech High School.



[Innovation Diploma Program](#)

A slide deck explaining the d.tech Innovation Diploma program.



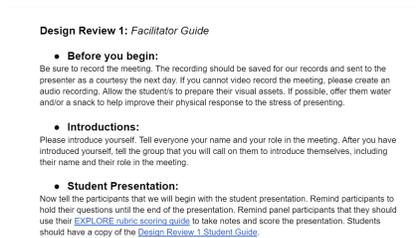
[Innovation Diploma Program Overview](#)

A video explaining the process of earning an Innovation Diploma.



[Innovation Diploma Curriculum Sample Module](#)

A slide deck that provides an overview of the Innovation Diploma curriculum.



[Innovation Diploma Design Review Facilitator Guide](#)

A document used by teachers to run Innovation Diploma design reviews.



[Innovation Diploma Design Review Rubric](#)

A document used to review Innovation Diploma projects.

Oral Defense Innovation Diploma.

Defending your project & your learning.

The innovation defense is your opportunity to show what you know and defend your abilities in specific outcomes. You are required to defend your skill level in the explore, create and learn outcomes, and you must choose two additional outcomes to defend.

These are the outcomes:

Category	Specific Outcomes:
Required	Explore, Create, Learn
Choose 2:	Self-Awareness, Taking Initiative, Persistence, Seeking Inspiration, Project & Team Management, Building Community Appropriately, Storytelling, Understanding Impact

[Innovation Diploma Oral Defense Preparation](#)

A document explaining how students prepare for the oral defense of their Innovation Diploma projects.

Innovation Diploma Outcomes

Explore

I can conduct the research needed to create an academically and ethnographically informed problem statement.

Create

I can build something to test out an idea that is connected to solving an important problem or meeting a significant need.

Learn

I can analyze the data collected in a skillful way and then apply the results to inform iterations and further prototyping.

Self-Awareness

I am aware of my strengths, Page 1 / 2