Design Thinking, Makerspaces and Maker Tech

Let our experts help you build a Makerspace program that reflects your unique school community. Build a foundation of “Why” with design thinking and support it with the “How” of both high- and low-tech fabrication.

Makerspaces are rapidly becoming a fixture of schools and learning communities devoted to providing diverse options for students and educators. With access to a wide array of media, processes and technologies, learners can explore core content topics in an inherently interdisciplinary way. By building prototypes, iterating on solutions and “thinking with their hands,” they expand their skills in problem solving, communication, collaboration and design.

Developing a vibrant Makerspace program takes thoughtful planning and investment. As such, our approach to supporting fledgling Makerspaces is multi-dimensional. We’ve honed our perspective through working with teachers and Museum visitors in Makerspaces for the last ten years. Our approach to co-developing great Makerspaces is also informed by the Exploratorium’s Tinkering Studio Learning and Facilitation Framework and evidence based strategies from IDEO and the d.school at Stanford.

DURATION
1 - 5 days

AUDIENCE
K - 12 educators
Informal Education Institutions
Sample Trainings and Support

**Design Thinking**
It’s easy to get caught up in the “How” of making - machines to buy, materials to stock, projects to explore. But apparatus and activities aren’t valuable on their own. As a toolset for problem solving, Design thinking is rapidly growing as an approach to business, industry and education. Design thinking can be used as a framework for projects in a Makerspace program or in a more traditional classroom, and it pairs perfectly with the Education Studio’s work in problem-based learning.

**Makerspace Vision Setting**
How do we tackle a concept as big as “Making”? During a half-day vision setting session, our facilitators will guide a coalition of teachers, administrators and other community members through a process of focusing resources on the topics and themes that matter most. The result: A Design Declaration for how your Makerspace will reflect the community it serves. This foundation makes future decisions regarding materials, curriculum and facilitation easier to manage.

**Makerspace Outfitting and Technical Support**
Based on discoveries from the Vision Setting session, our staff can guide the process of selecting and acquiring appropriate hardware and materials to equip your space. This takes a lot of the guesswork out of high tech and emerging technologies and avoids the common pitfall of buying things that will be underused and overpriced. In some cases, additional training may be recommended to bring staff members up to speed on use and care.

**Maker Tech: Digital Fabrication**
The staff at the Discovery Place Education Studio strive to stay on the cutting edge of technologies and techniques relevant to Makerspaces and Engineering classrooms. Digital fabrication is a family of technologies that leverage computer control to move tools with precision. Machines such as 3D Printers, CNC mills, laser cutters and vinyl cutters can be used in a wide array of applications in your learning community.

**Grant Funding Your Makerspace**
Are you considering writing a grant to fund your Makerspace project? We can help you build an appropriate ask for hardware and materials that will demonstrate your commitment to learning and ensure the granter’s resources have a lasting impact.

For more information visit [discoveryplace.org](http://discoveryplace.org) or call 704.372.6261

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**What Teachers are Saying**

After attending this training, I will seek additional tools to help students make their thinking more concrete and visible to deepen their understanding or clarify misunderstanding of what they are learning.

--Ms. Smith, Chicago Vocational Career Academy--

My instructional practices will incorporate a more project orientated lesson plan with students going through the design thinking process to generate ideas and gain feedback.

--Ms. Cruz, Memphis Business Academy--