

Maker Ed

2018

ANNUAL

REPORT



Letter from the Executive Director

Dear Friends,

At Maker Ed, we expect a world where every child has a vibrant future, and access to choice and agency in their life pursuits. And yet, we see that too many kids aren't getting the education that will pave this path for them, and teachers aren't getting the support they need to create vibrant, relevant, and lasting educational experiences. Our education system is struggling to meet the needs of children, teachers, and administrators. The need for change is clear.

Our work at Maker Ed is to support a shift in quality education in this country from a privilege for some into a reality for all.

Over our six year history, we have evolved our understanding of what Maker Ed and our partners must do to create this future that we seek. At the center of these reflections, we recognize that Maker Ed must foster and support not only individual change in educators and learning environments, but also holistic change across the systems that shape them. Through our strategic planning and goal setting in 2018, we have committed to work that shifts the practices, policies, and institutions that mire us and hold us back from the future we seek..

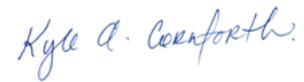
In this year's annual report, we are excited to highlight the ways we are cementing our strategic goals by focusing on professional learning, multi-year institutional support, the impact of maker education on youth and their teachers, and community advocacy. We have much work to do to drive the transformation we seek in individual schools, with our 18 regional hubs, and across the country. We know making looks different in every community because making is embedded in community. Rather than prescribing a one-size-fits-all methodology, we support communities as they work to develop strong, sustainable programs rooted in shared values and standards of practice. Maker education programs and practitioners at all stages of growth

have worked with us this year to anchor their maker-centered learning in the strengths and needs of their communities, grow their efforts and capacity, and build relationships with others facing similar questions or challenges.

At Maker Ed, we believe it is a critical moment for youth. The rapidly shifting terrain of technology, global economic and political systems, climate change, and culture has galvanized an opening for massive institutional and cultural change. By supporting educators, administrators and their institutions, we see this opportunity has the potential to transform how children are prepared to navigate their futures.

Thanks to you—our partners, advocates, and donors—we are on our way.

With gratitude,



Kyle Cornforth
Executive Director

The mission of Maker Ed is to harness the potential of maker education to transform teaching and learning.



Professional Learning

Studies consistently show that teachers have lasting impact on students lives, and that the planning, facilitation, and assessment strategies they use are integral to shaping the experience in every learning environment. Maker Ed's approach is to provide training, support, and resources to individual educators and the institutions and communities in which they work, as they are integrating making into their approaches. We are excited to share the progress of our team in our professional learning efforts.

Utilizing a blend of online and in-person opportunities for engagement, in 2018 we led workshops and trainings, published new, freely available online resources and publications, hosted our annual national convening, provided capacity building support to national and local organizations, and welcomed a 3rd cohort of partner organizations to our Making Spaces program, where they engage in multi-year support at the institutional level.

Trainings and Workshops

In 2018, we launched a new portfolio of learning opportunities for educators through trainings and workshops in our space and on the road! We are excited by the learning environments we created with educators this year:

5 Workshops

110 Teachers

8250 Students

What teachers are saying:

“The structure of experiencing, followed by creating, interspersed with reflection was incredibly well-planned. I loved being able to build a deeper understanding of making and then having SIGNIFICANT time to plan my own project!”

“Having time and space (and materials) to create a lesson plan and prototype, and having support along the way. It opened my mind that “making” can mean a lot more that I originally thought it meant.”



Building Community

We know that for transformative pedagogy and practice to scale and thrive, people need to be connected to local, regional, and national networks. This year, we started to explore how we might support and galvanize wider networks to tell the story of why maker-centered learning matters, and align and activate the public, influencers, and key decision makers to advocate for and support institutional change to ensure the integration and sustainability of this approach. At our annual Convening in October, we brought together almost 300 educators to connect and push forward our collective work. We are also continuing to engage teachers, administrators, and advocates all around the country through our Maker Promise initiative, in partnership with Digital Promise. Finally at the end of December, we moved our whole operation to a beautiful new location and launched the Maker Ed Community Studio, which includes a 1,200 sq ft makerspace and co-working offices.

The Maker Educator Convening

For the first time in 2018, the Convening put out an open call for proposals, which generated a fabulously diverse and community-influenced set of content. The themes that emerged from the proposals helped connect and situate the workshops, presentations, plenaries, ignite talks, and demos at the Convening, stringing together a focus on STEM/STEAM, equity and social justice, assessment and evaluation, and curricular integration. Maker Ed's 4th Annual Maker Educator Convening took place for 1.5 days on Oct 19-20, 2018 at The Tech Museum in San Jose, CA. It welcomed 270 attendees from 7 countries and 23 states, including 93 presenters from the wider community who led 35 varied sessions, ranging in format and topic alike.

100% of our survey responses confirmed that the Convening provoked their thinking; 95.7% noted that they would recommend the Convening to a colleague; and 82.6% of respondents said that they would return to the Convening next year, with a notable number of "no" responses indicating that travel & cost were their only hesitations. 100% of our presenter responses would want to present at the Convening next year, and 100% would also recommend presenting at the Convening to a colleague.

Maker Promise

Through the Maker Promise initiative, a joint effort between Maker Ed and Digital Promise, we are continuing to support passionate maker education advocates and leaders in their local communities. We hosted two Maker Educator Meetups at national conferences, and supported 12 additional local Meetups that built connections and community around making. We also helped facilitate three Edcamp "un-conferences," providing opportunities for maker education champions to build connections with each other across multiple states and cities. We publish resources for curriculum and designing for equity (such as the "[Making is for Everyone](#)" graphic below), and how to host a meetup to support our 2,500 signees in the US.

Making is everywhere.

"Start with the assumption that practices resonant with making are already present in diverse forms in all communities..."

Ask yourself:

Who is invited to participate?
How are they invited to participate?

Plan and promote activities that make **everyone** feel welcome.

Sign the Maker Promise to receive more resources for bringing making to your students. [Visit makerpromise.org](http://makerpromise.org)

Maker Promise
A collaboration between Maker Ed and Digital Promise



Capacity Building

As we begin to integrate our online support with our in person offerings, we published [10 new online learning modules](#), designed as self-paced professional learning opportunities for educators and administrators. Building on past years of resource development, curation, and research, they contain a mix of new, in-house designed resources and externally-developed content that highlights the work of others. The modules provoke big-picture thinking as well as support concrete and detailed activities. Topics include: “Getting Started: Visioning” “Planning: Pieces & Parts,” “Curriculum Ideas: Four Approaches,” and a set of “Leadership Pathways: Setting the Stage and Sustaining Momentum,” among many others. These modules will allow us to support educators remotely and have set us up to build a blended learning

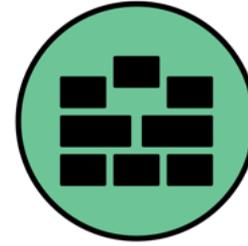


model in 2019. We also launched new, interactive functionality - users can upvote and share resources that are helpful and inspiring.

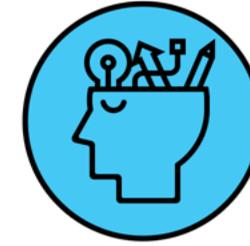
Maker Ed’s approach is built on the understanding that lasting, transformative change can only happen

when organizations are supported on a deep level, with multiple touch points. In 2018, we did this work through a Young Makers pilot, and through our Maker VISTA program.

The Young Makers: From Making to Invention pilot was built on Maker Ed’s experience in running our Young Makers program, while expanding the model to add other important elements: working to establish key partnerships and build capacity (with regional or national out-of-school-time providers from youth-serving organizations, and formal educators from schools in high-poverty communities) and making visible and accessible the path to invention through making. Through the course of the pilot, we worked in close partnership with the Boys & Girls Clubs of America, the Girl Scouts of Northern California, and the Los Angeles Unified School District to provide resources, training and a community of support. We also published the following resources for teachers in our resource library:



[Language: Building a Prompt](#)



[Facilitator Tips](#)



[Program Planning: A Young Makers Season](#)

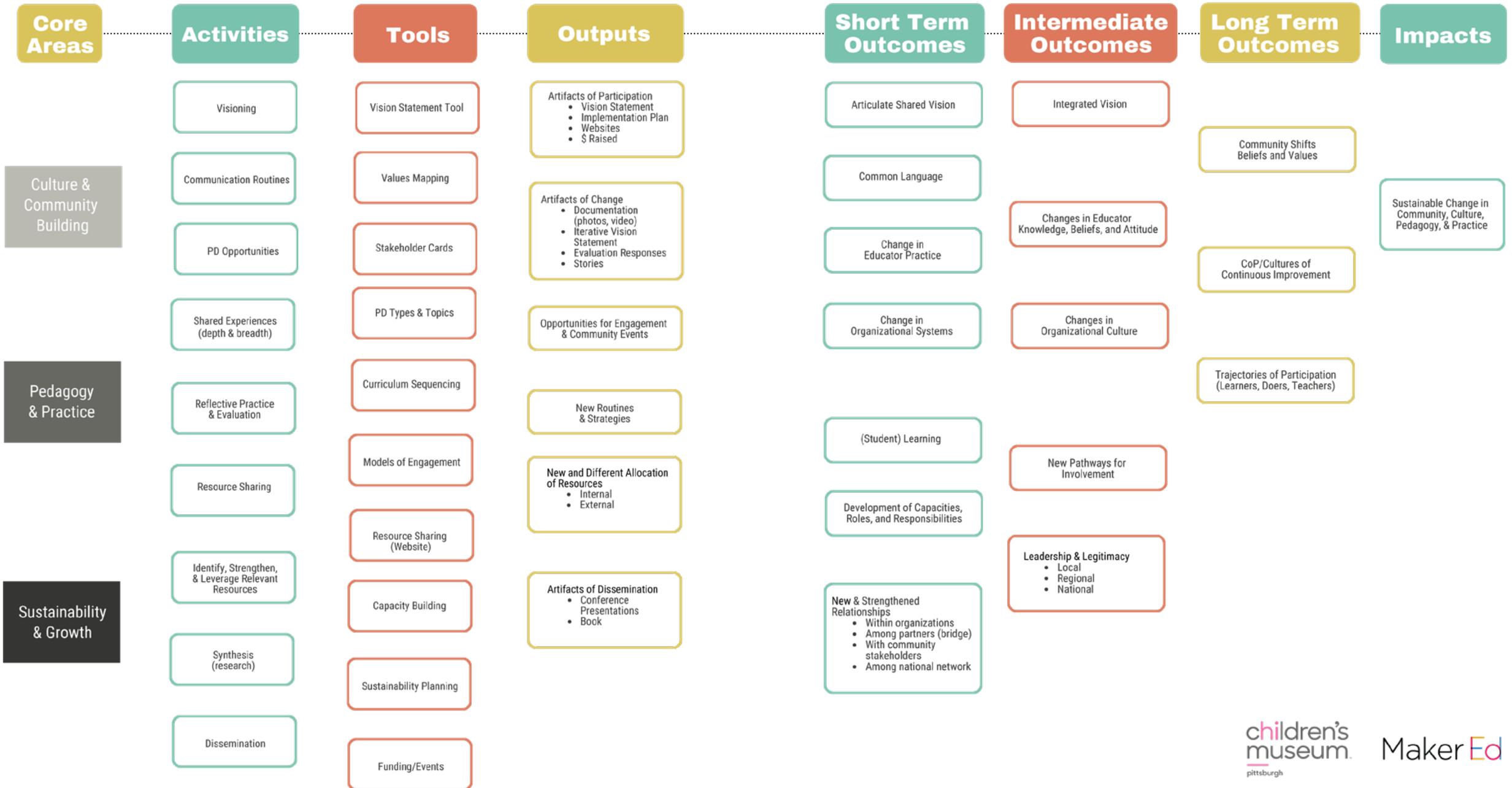
After five incredible years, Maker Ed concluded one of its initial programs: Maker VISTA. Since the fall of 2013, Maker Ed had the honor of running the Maker VISTA program in partnership with the Corporation for National and Community Service (CNCS). Maker Ed made the hard decision to discontinue the VISTA program last year, which we concluded in September 2018. We are grateful for the partnerships we formed and all that we learned, and will continue to integrate the learnings, successes, failures, and knowledge gained through these past 5 years into our regional hubs and workshops. We believe this will help us be more purposeful in all of the work we do as a community of makers.

Multi-year Institutional Support

We are thrilled to continue Making Spaces, our multi-year institutional support program, a partnership between Maker Ed and Children’s Museum of Pittsburgh (CMP). “Making Spaces: Expanding Maker Education Across the Nation” helps build the maker education movement by connecting educational institutions within a local region to develop sustainable making programs. The program employs an innovative model where multiple participating Sites (usually schools) partner with a nearby Regional Hub (such as a school district, library, museum, or community organization). These Hubs provide Sites with support to help jumpstart and sustain maker education in their learning environments, both in-school and out-of-school-time, through professional development, tools and resources, and community engagement, building an ecosystem of maker education in their regions. We are excited to share our updated logic model for this program.



MAKING SPACES Logic Model



The Impact of Maker Education

If we are to sustain a movement for maker education, and ensure that every child has access to it, we must develop a better understanding of associated youth learning outcomes and evaluate the efficacy of our efforts. In 2018, we collaborated with partners to develop approaches for assessing maker education, including how and what to assess. We developed tools, put them into practice, and will begin to share those widely in 2019.

Open Portfolio Project

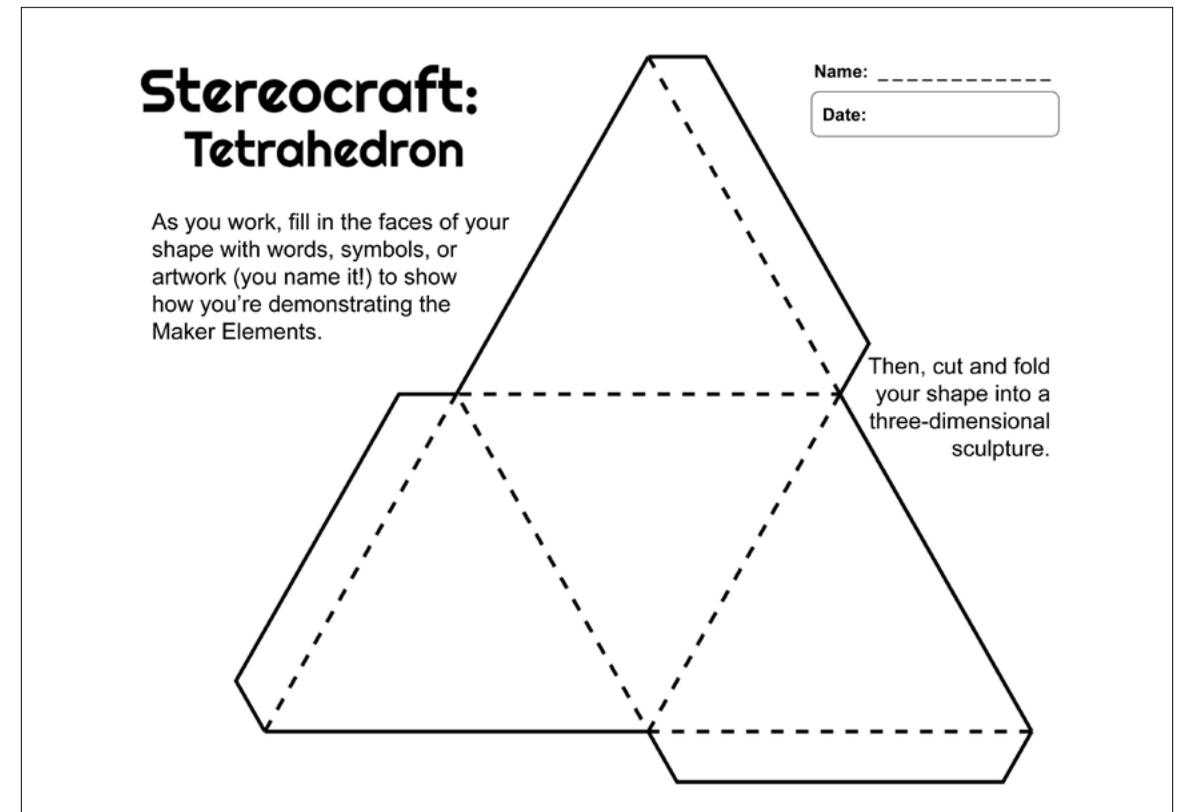
In February 2018, we completed [Phase 2 of our Open Portfolio Project](#). A nearly 5 year partnership with Indiana University's Creativity Labs, this effort addressed maker education and assessment early in the field's development. We concluded the work with the publication of the Open Portfolio Project Research Brief Series, Phase 2. Our final publication examines the motivations, implications, and practices necessary to situate open portfolios as a means of assessment in maker-centered learning environments, asks big questions, and suggests next steps for researchers, practitioners, and funders to consider.

Beyond Rubrics

In 2018, Maker Ed worked in close partnership with MIT's Teaching Systems Lab on a research project, "Beyond Rubrics: Moving Towards Embedded Assessment in Maker Education." The project engaged teachers and administrators at two field sites: middle schools in Portola Valley School District in California and Albemarle County Public Schools in Virginia. The research team conducted a series of workshops with each middle school to co-design, develop, and iterate on low-tech assessment tools that meet the desires and needs of the teachers. Teachers at each school tested out the tools as part of curriculum implementation, and the team continued to support and further develop on all fronts. These tools are intended to capture a better understanding of the skills inherent in maker education, highlight them through common, shared language with teachers and students alike, and surface ways in which to capture evidence of the growth & development occurring, whether related to content knowledge, agency, or troubleshooting.

The team has presented its year-long work at 5 national conferences, and the research project has been highlighted in EdSurge and Edutopia, drawing attention to the critical questions and needs surrounding assessment of maker-based learning.

One of the Beyond Rubrics tools prototyped with teachers and students is called Stereocraft, included below. These flat shapes can be cut out and folded into 3D shapes that represent the skills and capacities inherent in the whole learner. On Stereocraft, students can jot notes of their learning process, draw sketches, set goals, and record evidence. These shapes begin to show and share the many ways in which skills and learning manifest.



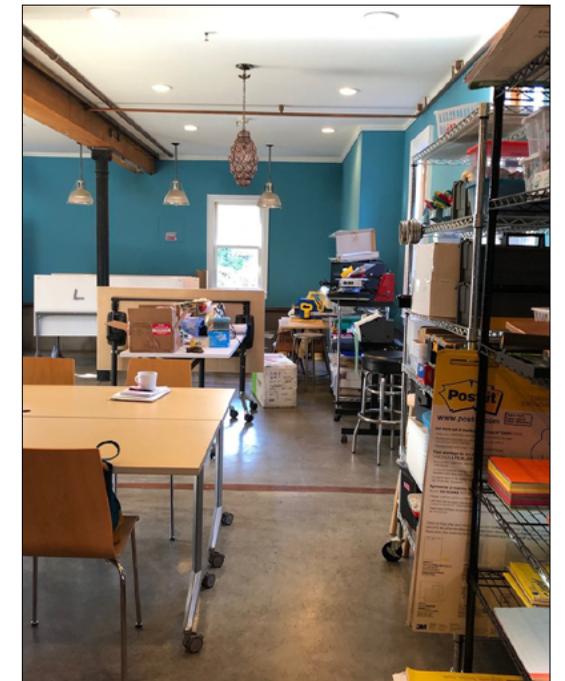
Maker Ed Community Studio

Our beautiful new location allows us to build our capacity to offer quality, ongoing professional development experiences for maker educators. In December of 2018, we moved our office to a historic Victorian building in the West Berkeley corridor, long known for its arts and manufacturing industries. The building, once a 3-story home, is on 1/3 of an acre, with multiple office and meeting rooms inside, a full kitchen, and an adventure playground, garden beds, and woodshop area outside. But the most exciting feature of the space, for us, is the 1,200 sq. ft, ADA-accessible studio on the ground floor—we now have a well-supplied and fully-functional makerspace!

This new spot allows us to be more actively engaged with the day-to-day practices of the educators we work with. In a makerspace of our own, we can test out project ideas, practice using the design tools and thinking routines we recommend to others, and connect in-person with the maker community in the East Bay and beyond. We're excited to host our 2019 workshops, trainings and our inaugural Summer Institute in this new setting.

“Our team really enjoyed being in your space. It’s beautiful — we appreciated the craftsmanship of the interior — the wood, the doors, the paper coverings on the doors, the fireplace, the furnishings etc. We also appreciated the amenities available in the Fireside room — white board, large screen, the coffee and tea service, and the dishes & silverware.”

- Paula Mitchell



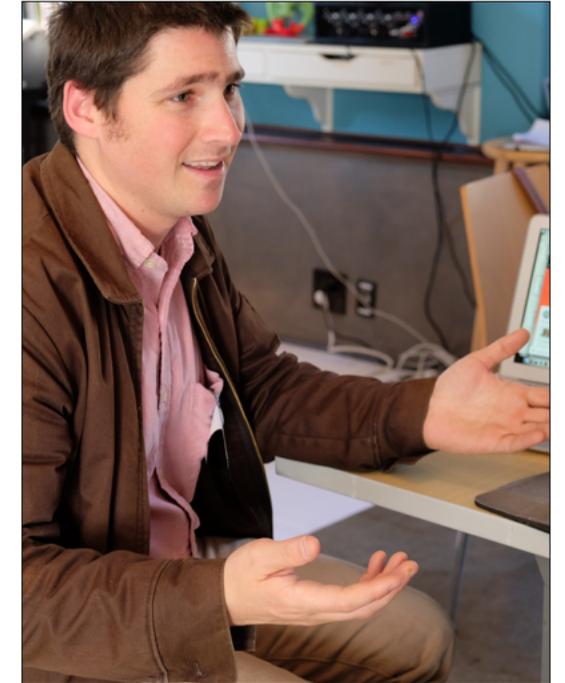
The Maker Ed Team

2018 brought exciting transition for Maker Ed. We welcomed a new Executive Director in March, and as we worked through strategic planning and refining our organizational goals, there were many additional positive changes on our team as well.

We hired Aaron Vanderwerff as our Director of Learning to lead the learning team. Throughout his sixteen years as a public educator, Aaron has been passionate about making and inquiry, believing that learner-centered, hands-on education can revolutionize our educational system. We also welcomed Lauren Penney to run our Making Spaces program. Lauren has been supporting youth, educators, and making for the past fifteen years across a variety of educational environments.

We also had some internal role changes! Justin Boner joined the learning team, transitioning from Program Coordinator to a new role, Lead Maker Trainer. Stephanie Chang, who previously held the role of Director of Programs, transitioned to a new role for Maker Ed as our Director of Impact. Some members of the Maker Ed team found new opportunities for growth and learning by transitioning out of the organization. We would like to thank Daniella Shoshan (VISTA Program Manager), Jan Schmitz (Office Manager), and Hadiyah Shabazz (VISTA Program Manager) for their years of service and contributions to our organization!

- Kyle Cornforth** - Executive Director
- Stephanie Chang** - Interim Executive Director; Director of Impact
- Jakki Spicer** - Director of Partnerships & Development
- Aaron Vanderwerff** - Director of Learning
- Katie Barthelow** - Maker Corps Program Manager
- Justin Boner** - Lead Maker Trainer
- Lauren Penney** - Making Spaces Program Manager
- Daniella Shoshan** - Maker VISTA Program Manager
- Jan Schmitz** - Office Manager
- Hadiyah Shabazz** - Maker VISTA Program Manager
- Keyana Stevens** - Communications Manager



Gratitude for Our Partners

Maker Ed is an organization that is based on relationships. We could not do our work without the support, partnerships, and collaboration that we have with funders, programmatic partners, our board of directors, and the incredible educators we serve. 2018 was an amazing year, and those who worked with us to make it possible cannot be thanked enough.

Funders

Changemaker: \$400K+

- Google*

Innovator: \$250K-\$399K

- Cognizant

Visionary: \$100K - \$250K

- Chevron
- Gordon & Betty Moore Foundation*
- National Science Foundation*
- Schmidt Futures

Champion: \$50K - \$100K

- The Nancy C. and Dale Dougherty Family Foundation
- Institute of Museum & Library Services*
- The Lemelson Foundation

Igniter: \$10K-\$50K

- CNCS / AmeriCorps VISTA
- Anthony D. & Cynthia A. DeRose
- Infosys Foundation
- Oracle

Supporter: \$1K-\$10K

- Autodesk
- Galileo Camps
- Mark Greenlaw
- Lectrify
- Jay Melican
- Kathryn Nash
- Jennifer Phillips
- Jane Werner

Additionally, we would like to thank Humble Bundle for their ongoing support of Maker Ed. In 2018, individual donors contributed more than \$150,000 towards Maker Ed's mission by using Humble Bundle's unique charity model.

**multi-year grant*

Friend: up to \$1000

- Aaron Ackermann
- Kipp Bradford
- Paul A. Hansen
- Kristina Holzweiss
- Beth Hutchins & Pete Skeggs
- Katie Jacks
- Sean Justice
- Brendon Kingsbury
- Kenny Langley
- Richard Legault
- Logickull
- Elizabeth Mikeska-Benfield
- Holly J. Rankin
- Erin Riley
- Robert & Jenna Wachtel Provonost
- Aman Sawhney
- Jakki Spicer & Andy Lambert

In-Kind Donors

Birdbrain, Google, Cognizant, Chevron, Galileo, MakeyMakey, Google, Autodesk, Make:, Ictriify, CMP, Pixar, MatterHackers, Chez Panisse, Back to the Roots, 21st Amendment Brewery, Drake's Brewery, Faction Brewery, Gordon Biersch Brewery, Laguintas Brewery, Kyle Cornforth

Program Partners

- Children's Museum of Pittsburgh
- Digital Promise
- Making Spaces Hubs:
- Betty Brinn Children's Museum (Milwaukee, WI)
- BLDG:61 @ Boulder (CO) Public Library
- Bubbler @ Madison (WI) Public Library
- Digital Harbor Foundation (Baltimore, MD)
- El Garage Project Hub (Mexicali, Mexico)
- Fab Lab Houston (TX) @ Baker Ripley
- Fort Worth (TX) Museum of Science and History
- Idaho STEM Action Center
- ideaLAB @ Denver (CO) Public Library
- KID Museum (Bethesda, MD)
- Montshire Museum of Science (Norwich, VT)
- San Mateo County (CA) Office of Education
- Science Museum of Minnesota
- Scott Family Amazeum (Bentonville, AR)
- Sonoma County (CA) Office of Education
- MIT's Teaching Systems Lab Univ of Wisconsin, Madison
- Wonderful Idea Co.

Board Acknowledgement

We have a spectacular group of board members who worked above and beyond for Maker Ed in 2018. We could not have accomplished our work without their guidance, advice, support, and time.

- Tony DeRose (Board Chair as of June 2018)
- Jen Phillips (Vice Chair)
- Kathryn Nash (Treasurer)
- Kipp Bradford
- Dale Dougherty (Board Chair through June 2018)
- Mark Greenlaw
- Jane Werner
- Jay Melican
- Pam Moran
- Jay Silver
- Matt Therian

We would especially like to thank Jane Werner, visionary leader of the Children's Museum of Pittsburgh for her years of service on the Maker Ed board. We would also like to give special thanks to Dale Dougherty for his work on behalf of the maker movement writ large and his enduring support of Maker Ed as a founder, funder, ambassador, and our founding board chair. We are inspired by his leadership and commitment to making as a strategy to improve the educational experience for children everywhere.

“The most profound thing we can do is encourage kids to experience the world themselves.”

- Dale Dougherty

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