



MAKER ED



iexplora!

Making Spaces

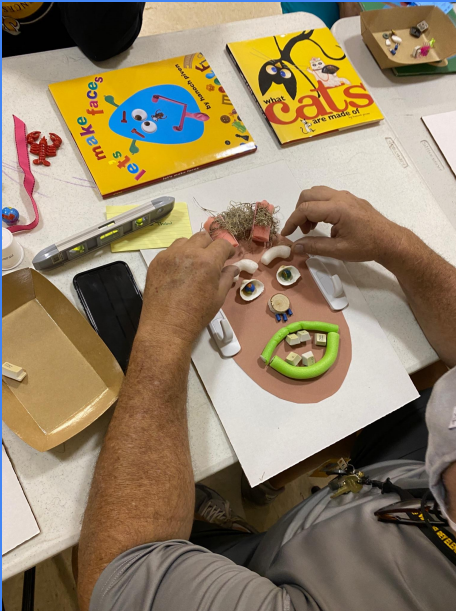


Museums Developing and Delivering Quality Maker-Centered Professional Development

Get started!

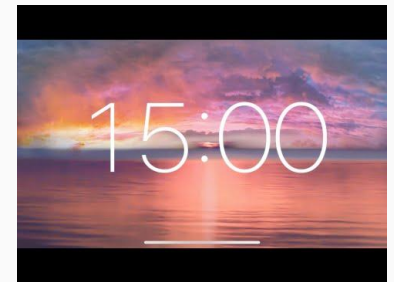
Making Faces:
Tinker to Discover

1. Choose a paper oval
2. Look at the loose parts in the round tray
3. Choose an assortment of loose parts that can make eyes, noses, and mouths
4. Tinker with objects to create a face on the oval
5. Optional: use objects from your bag or pockets
6. Listen for prompts



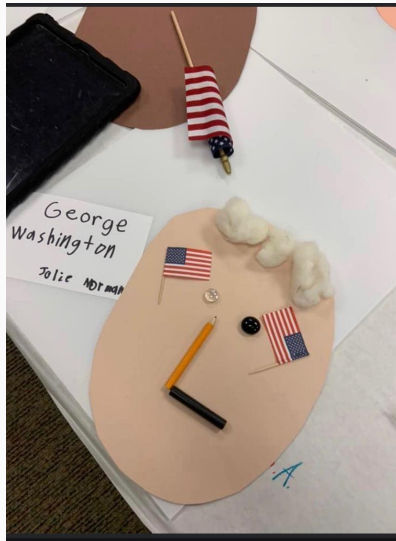
Making Faces: Make to Learn

Change the expression of your face according to the questions we ask



Making Faces: Application Project

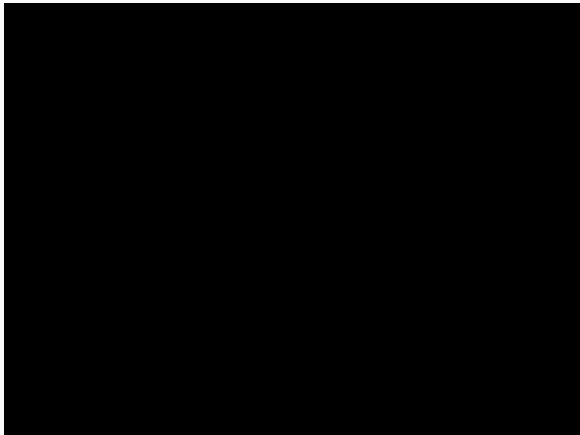
Portraiture: Presidents, Self Portraits, etc



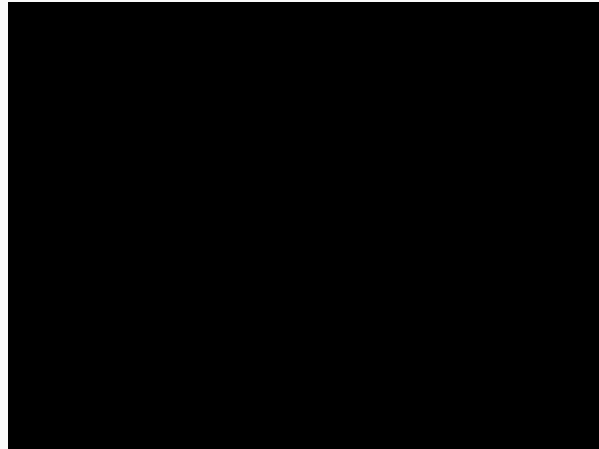
Making Faces: Application Project

Apps that you can use to animate and add sound to your face.

Chatterpix



Stop Motion Studio



Gif Maker





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Making Spaces

**Museums Developing and Delivering Quality
Maker-Center Professional Development**



MAKER ED

Our mission is to harness the potential of
maker education
to transform teaching and learning.

We provide training, support, and resources to individuals, institutions and communities who are integrating maker education into their learning environments.

<http://makered.org>

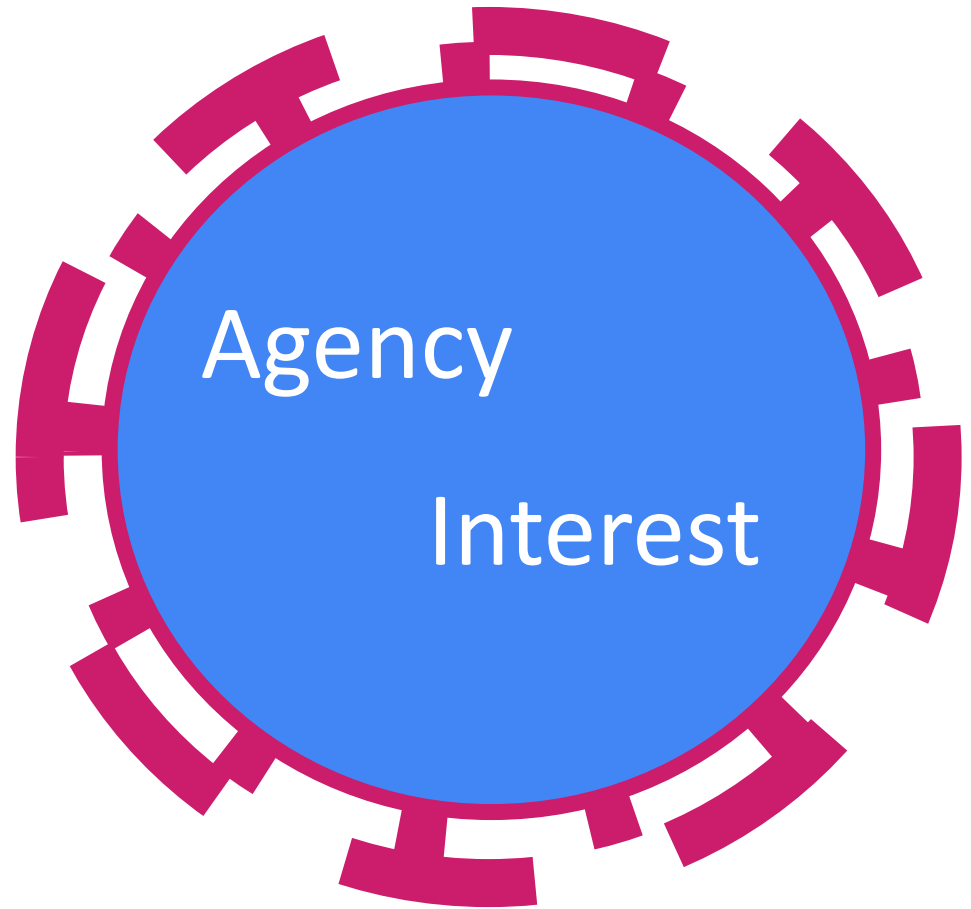


@MakerEdOrg

Three delivery methods:

- Online resources
- Events (workshops & convening)
- Learning Communities (Making Spaces)

What is
Maker-Centered
Learning
and why is it
important?





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Approaches to Maker Education

TINKER TO DISCOVER

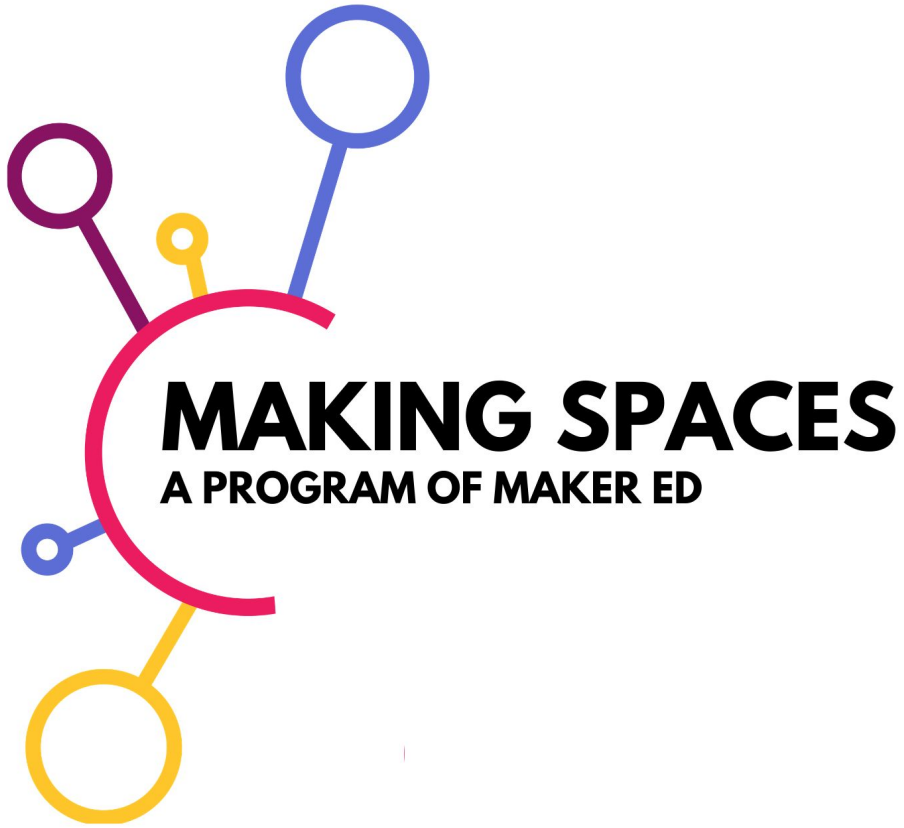
Learners develop an initial understanding through tinkering and making. Learners work toward short-term learning goals and then explore, make, and own their discoveries.

MAKE TO LEARN

Learners build on, deepen, or cement understanding through making.

APPLICATION PROJECT

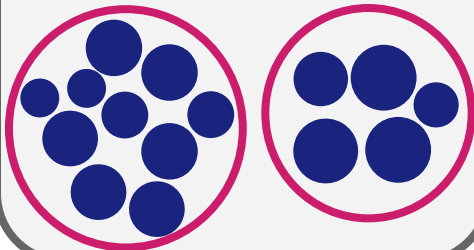
Learners apply their understanding in order to make a specific project, deepening and showcasing their knowledge.



To develop a national strategy to sustainably integrate making into schools and learning environments across the country

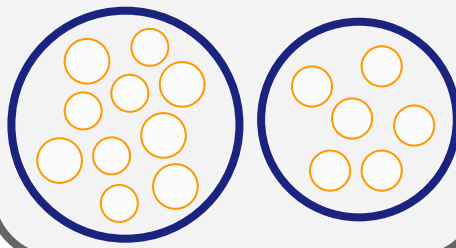
National Cohort

Partner with and connect
5-10 Regional Hubs



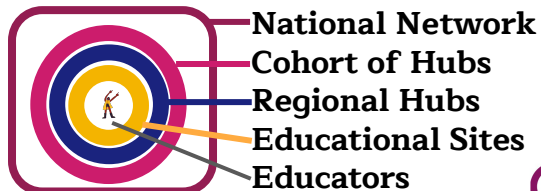
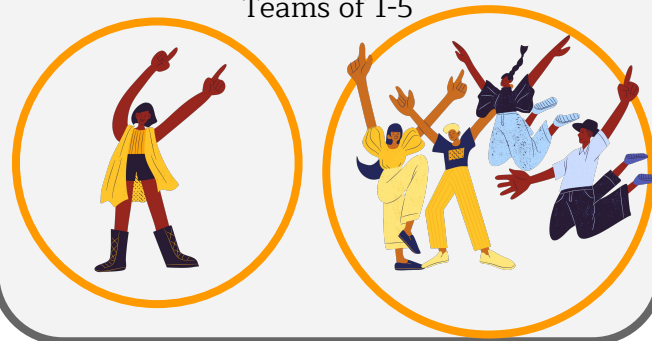
Regional Hubs

Partner with and connect
5-10 local educational sites



Educational Sites

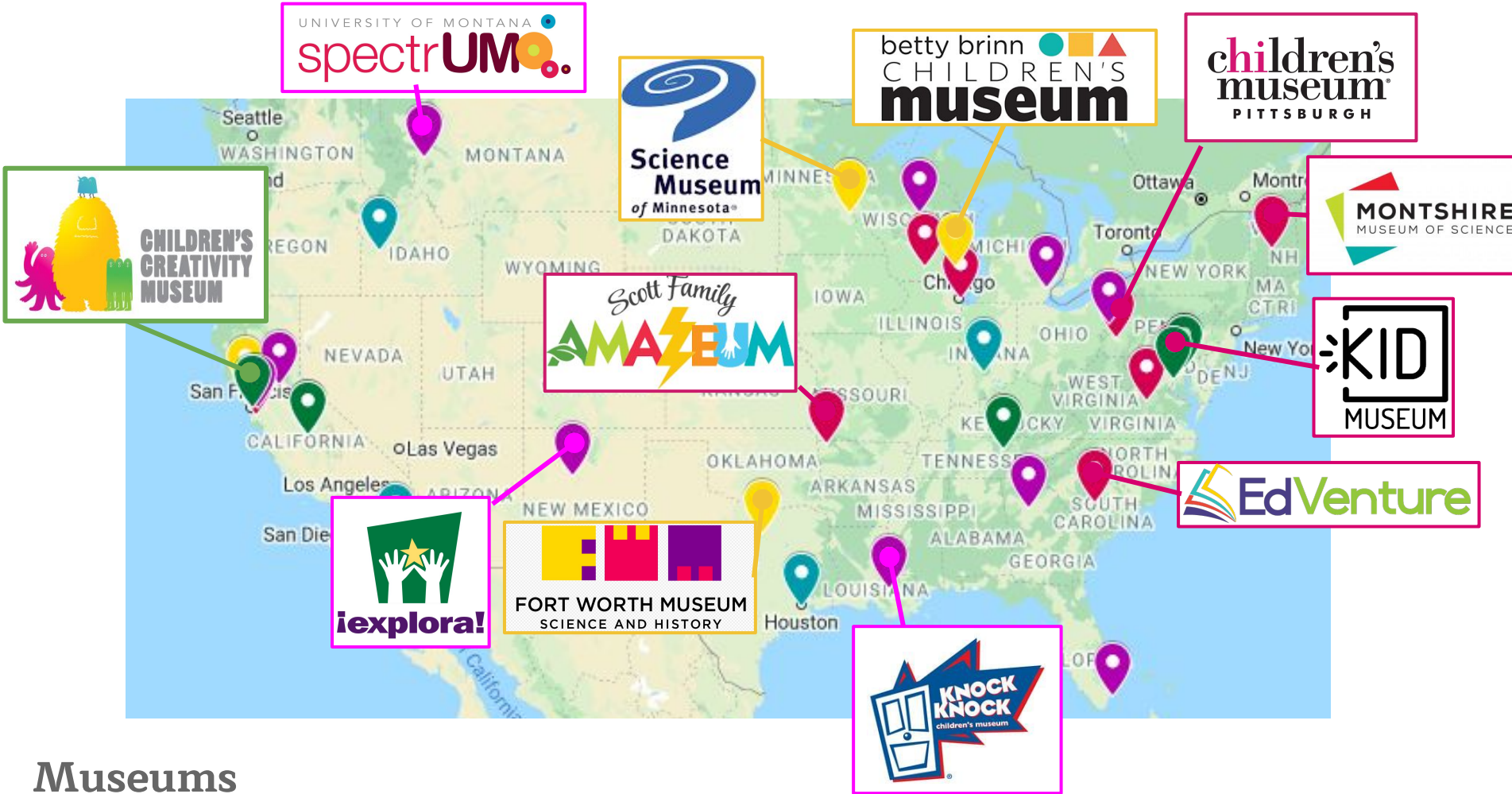
Teams of 1-5



National Network

Connects Hubs across cohorts





Museums



Libraries



innovation center
@ Folsom Lake College



Northcentral
TECHNICAL COLLEGE

WAYNE **RESA** SERVICE LEADERSHIP COLLABORATION EXCELLENCE
Leading... Learning for All



Matt's Maker Space



Agency by Design Oakland



Sonoma County
Office of Education



INDIANA UNIVERSITY



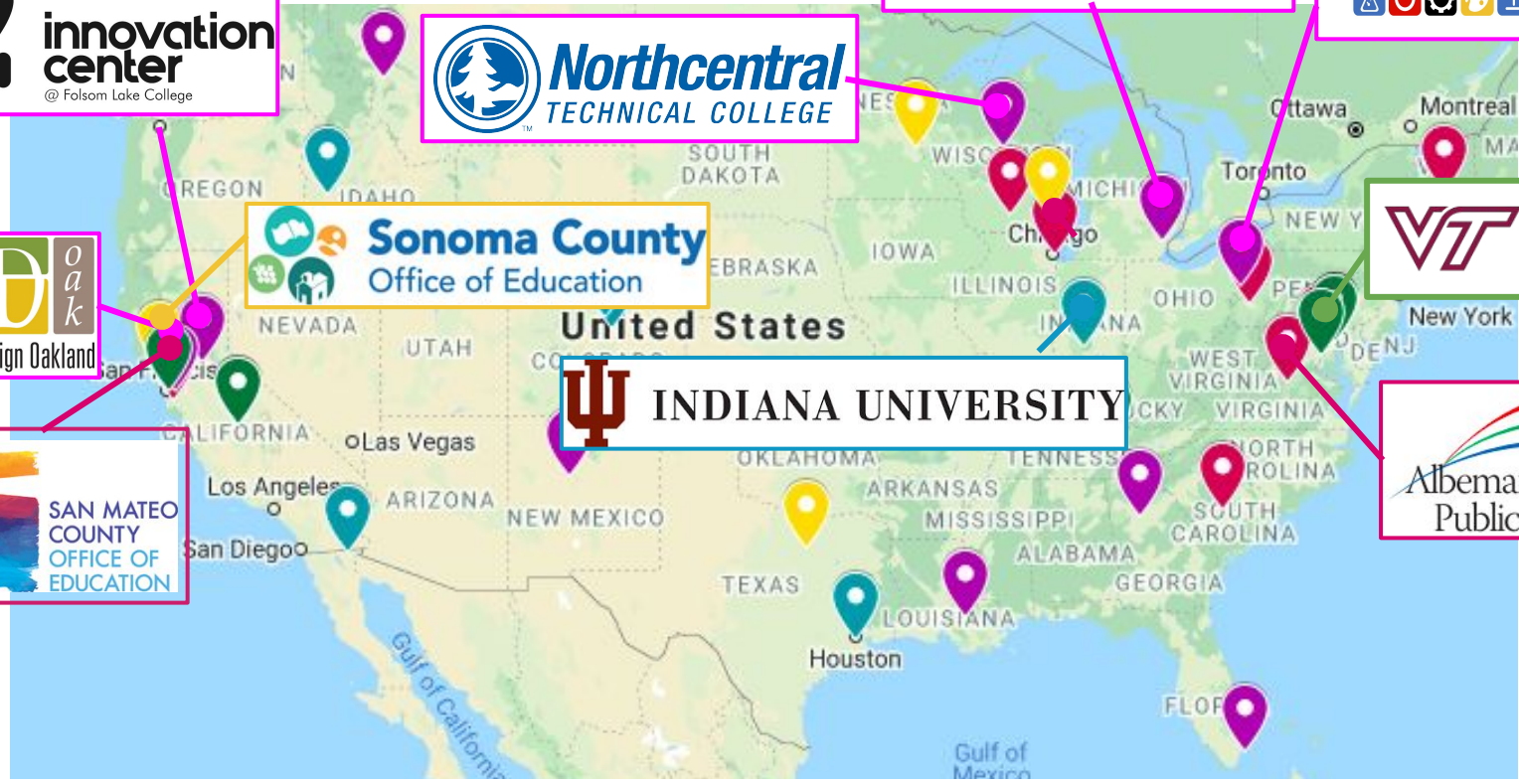
VIRGINIA TECH™



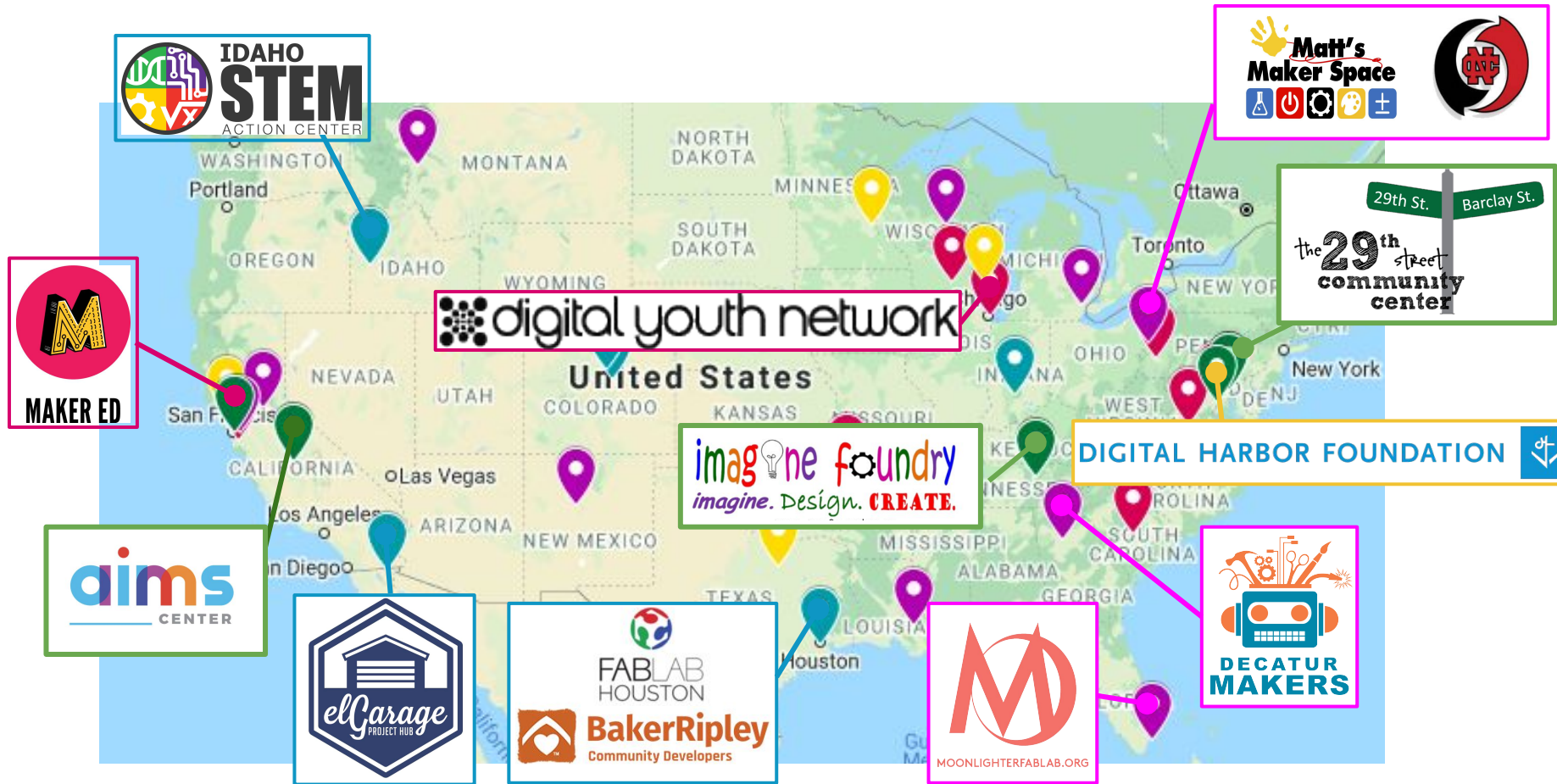
SAN MATEO COUNTY
OFFICE OF EDUCATION



Albemarle County
Public Schools



Educational Institutions



Community Centers, Non-profits, and one Government Agency



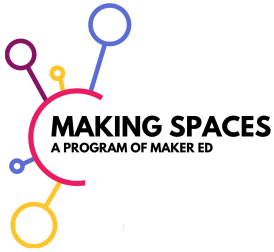
Making Spaces National Network

Be a part of
Cohort 6!

Applications
close June 30

[https://makered.org/
making-spaces/](https://makered.org/making-spaces/)





Making Spaces National Network: Structures of Support

Who



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Hubs

10 orgs, team of 2

What Structures

Intensive Workshop

2 day in-person workshop
once a year

Cohort Call

Monthly zoom with full
Cohort

1-1 Call

Monthly zoom w/ Hub and
Maker Ed

Community Call

Monthly zoom with all
Making Spaces Cohorts
(optional)

Documentation

Resources

Shared Google Drive
Curated collections

Community Slack

Hub Portfolios

To document process and
share work with current
and future Hubs

Making Spaces - Creating Sustainability

Culture

- Establish or refine program values and vision
- Create a more inclusive organization

Pedagogy

- Engage with maker-centered pedagogical strategies
- Develop activities within a maker-centered framework

Equity

- Implement anti-racist and anti-oppression tools
- Integrate liberatory and equity focused teaching practices

Community

- Build internal capacity & funding strategies
- Increase engagement and relevance with local community



- Location: Albuquerque, NM
- Birthdate: 1995
- 40,000 square feet
- Making Spaces Cohort 4 Hub
- Making Spaces Goal: To support each site in developing its own system of Makerspace values



Creating Makerspace Values

Explora: Creating Makerspace Values



Initial survey results: concern about sustainability

Steps:

- Focus on values
- Develop logic models
- Require more than one participant per site

Explora: Creating Makerspace Values



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	M	A	K	E
1	Making engages all learners, particularly those who are marginalized by traditional schooling methods.	Making helps young people develop good habits of mind.	Making allows youth to develop as artists, innovators, engineers, entrepreneurs, and problem-solvers.	Making allows youth to improve their lives and contribute to the communities around them.
2	Making programs support opportunities for developing interest and identity.	Making prepares young people for success in the jobs of tomorrow.	Making is an ideal platform to provide equitable educational opportunities to all.	Making is an ideal platform for applying previously taught content knowledge to new situations.
3	Making is learner-driven and connects to the intellectual passions of youth.	Making is easily adapted to culturally and linguistically responsive teaching and learning.	Through making, young people gain access to a wider variety of job opportunities.	Making develops critical thinking, creativity, communication, and collaboration.
4	Making increases youth interest in STEM careers.	Making deepens youth engagement in learning by connecting to familiar practices.	Making builds teamwork and positive working relationships between student peers.	Making gives youth an authentic, meaningful, and engaging learning experience.

Explora: Creating Makerspace Values



Social Justice and Equity - M1, A3, K2, E1

Workforce Development - M4, A2, K1, K3

Skill Development - M2, A1, K4, E3

Learning - M3, A4, E2, E4

VISION STATEMENT Tool

VALUES

What are our values? What is our philosophy?

COMMUNITY STRENGTHS

What are the strengths, interests, and resources in our community?

Look Outward

Look Inward

Look Forward

AUDIENCE

Who is the audience we serve?

Who are our partners?
Who are our stakeholders?

GOALS

What are our goals? What do we want to accomplish?

How will we seek feedback/ input from our stakeholders?

WHY THIS MATTERS

What have we observed that supports this development?

What are the needs we will fill or problem we will solve?

Why is this important for the audience, stakeholders, and backers?

METRICS OF SUCCESS

How will we know we met our goals?

We believe (our values):

- E1 Making allows youth to improve their lives and contribute to the communities around them.
- E3 Making develops critical thinking, creativity, communication, and collaboration.
- K2 Making is an ideal platform equitable educational opportunities for all.

Based on (our strengths):

-

We aim to (our goals):

- (1) Provide opportunities for beginning ELs feel they can express themselves
- (1) Create authentic purpose for making so that beginnings ELs feel like they are part of and contributing to the community
- (2) Encourage K-2 girls to feel proud of their STEAM abilities
- (2) Provide experiences for active engagement in STEAM for K-2 girls

For whom (our audiences):

- (1) Beginning English Learners
- (2) K-2 girls

Because we know (our community needs):

-

We will succeed when (our metrics for success):

-

Explora: Creating Makerspace Values



Session Structure:

- Network/community building activity
- Hands-on Maker activity
- Building sustainability activity
- Discussion/debrief

Explora: Creating Makerspace Values



explora!

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- Location: Baton Rouge, Louisiana
- Birthdate: August 22, 2017
- 26,000 square feet
- One of our 18 learning zones is a dedicated and facilitated makerspace
- Making Spaces Cohort 4 Hub



Focusing on Early
Childhood to Spark
the Young Learner's
Interest in Making



Making Spaces Vision Statement

We believe...making and tinkering is a pathway to STEAM careers for our youngest learners.

We aim...to grow leaders and provide professional learning experiences for early childhood educators.

We do this because...there is a gap in STEAM professional development in early education.

We will succeed when we have...built regional capacity to sustain, grow, and deepen the impact of maker-centered learning.





Focusing on Early Childhood to Spark the Young Learner's Interest in Making

Who

- Cohort 1–9 sites: public schools, lab school, library branch from 3 parishes (counties)
- Leadership Teams: teacher representative from each grade PreK to 3rd plus administrator (principal, librarian, STEAM coordinator, etc)

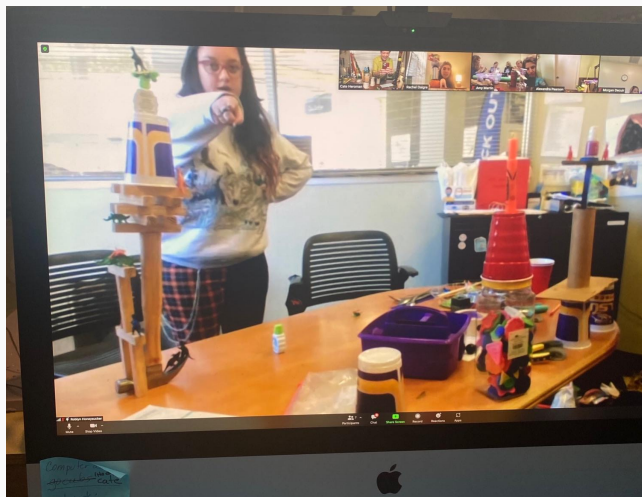




Focusing on Early Childhood to Spark the Young Learner's Interest in Making

How

- Mix of virtual and in-person professional development with making and tinkering themes ranging from light and shadow to circuits to kinetic sculpture and simple machines
- Constantly evaluating to meet sites' needs





Focus on Phenomena

What

- The Next Generation Science Standards (and Louisiana's State Standards) guide teachers on how to engage young students in science using phenomena.
- Phenomena are observable events that occur in the universe and that we can use our science knowledge to explain or predict.
- Our approach for *Making Spaces* aligns to these standards—we tinker with phenomena.



Spinning



Gravity and Balance



Force and Motion



Real World Connections

The Literacy Connection

Much of what we do starts with a story.

Children's literature is ripe with ideas for maker-centered learning projects.

We often use problems presented in children's books to springboard our ideas.





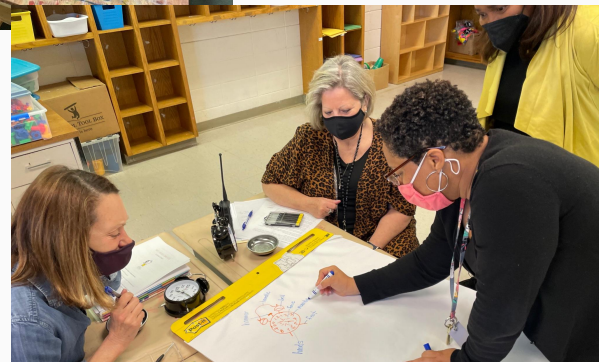
Real World Connections

Local Connections

What are the children seeing around their communities?

What events/holidays/etc. can jumpstart a maker project?

- Weather events (hurricanes, power outages, etc)
- Black History Month (Black Inventors and Inventions)
- Fairs and Festivals (tinkering with sound or simple machines)





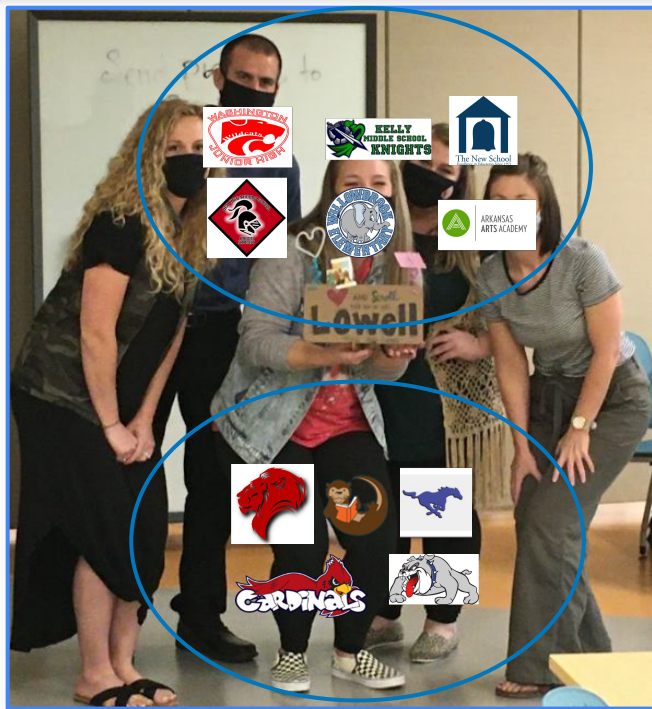
- Location: Bentonville, Arkansas
- Birthdate: July 15, 2015
- 27,000 square feet
- Making Spaces Cohort 1 Hub
- The Amazeum exists to spark and nurture the curious and creative spirit in all of us. We do this by focusing on play and making/tinkering.



Building Community Through Cohort Model



Building Community Through Cohort Model





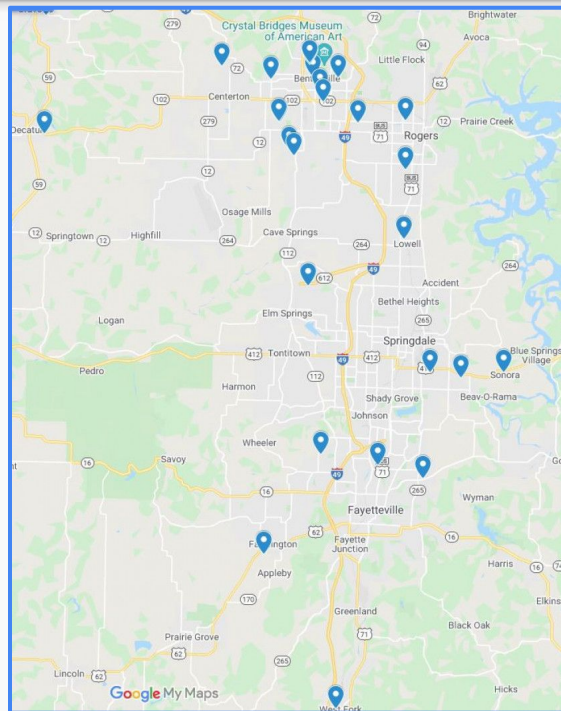
Connector and Convener

6 cohorts

27 schools

10 districts

1 mission





Catalyst for Transformation

Date	Time	Topic
Thursday Sept 16, 2021	4:00-6:00 pm	Investigate Importance of Making
Thursday Oct 7, 2021	4:00-6:00 pm	Values and Vision
Thursday Nov 11, 2021	4:00-6:00 pm	Curriculum Integration
Thursday Dec 9, 2021	4:00-6:00 pm	Documentation and Assessment
Thursday Jan 13, 2022	4:00-6:00 pm	Implementation Strategies
Thursday Feb 17, 2022	4:00-6:00 pm	Supplies and Budget
March 2022	TBD	Site visits at individual schools MCL introduction for school staff
Thursday April 7, 2022	4:00-6:00 pm	Fundraising for Sustainability
Thursday April 28, 2022	4:00-6:00 pm	Planning Next Steps





Strategies for Building Community: Norms

Ground Rules

Misery is Optional

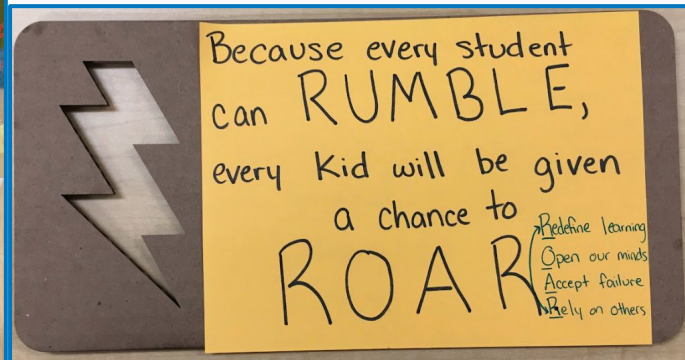
Lean In as a Learner & Listener

Be raggedy

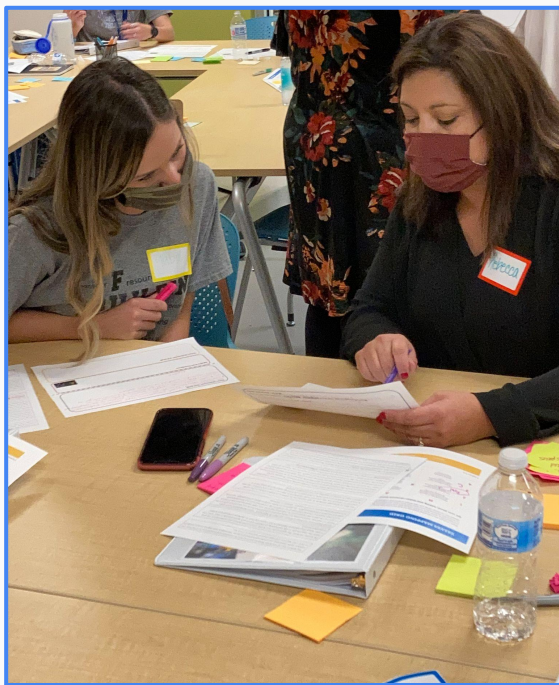
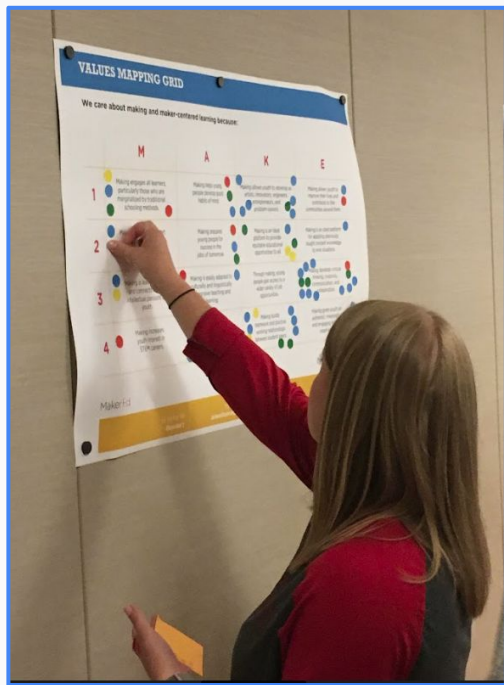
No one knows everything, together we know a lot



Strategies for Building Community: Profile Making



Strategies for Building Community: Mixing Teams





Strategies for Building Community: Shared Experiences





Strategies for Building Community: Utilizing Alumni





Strategies for Building Community: Valuing Relationships



Questions?

Connect with us

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