

The National Invention Convention and Entrepreneurship Exposition (NICEE)

ENGAGING AMERICA'S K-12 KIDS IN PROVEN INVENTION AND ENTREPRENEURSHIP CURRICULA

PRESENTED BY: The STEMIE Coalition – A U.S. National 501(c)(3) Non-Profit (In Formation)





Elevating Invention and Entrepreneurship in K-12

NICEE's mission is to have *every child* in *every school* become an inventor and/or entrepreneur and instill problem-solving, problem-identification, entrepreneurship, and creativity skills for life, through inventing, innovating, and entrepreneurial activities.



Teaching & Investing in a Full Range of Skills

STEM Skills

- ✓ Math
- ✓ Science
- ✓ Following directions
- ✓ Applying rules & formulas
- ✓ Structured decision-making
- ✓ Basic problem solving

Additional Skills We Need

- ✓ Ability to solve undefined problems
- ✓ Ability to go beyond previously learned concepts and rules
- ✓ Ability to consider novel approaches to old problems
- ✓ Ability to generate alternative solutions

Attributes We Desire

- ✓ Leadership
- ✓ Creativity
- ✓ Ability to deal with ambiguity
- ✓ Perseverance / Passion
- ✓ Resourcefulness
- ✓ Self-Accountability

Scientific method
Engineering Design Process

+

Invention Process
Entrepreneurship Process

=

Creative Thinkers
Engineers Entrepreneurs
Scientists Inventors

We have programs designed to develop a full range of skills for our future businesses and communities

A Place for Every Kid and Every Skill



Some kids love
math, science, and
computers



Some kids are great at
building things



Some kids are great at
having an impact

We harness everyone's talents and show the important interdependencies between science, math, engineering, technology, invention and entrepreneurship

Building the Future Workforce

STEM

Kids are given *well-defined* problems to solve in structured environments

Specific goals, clearly defined solution paths, and clear outcomes

STEMIE

ENTREPRENEURSHIP

The commercialization of a solution into a market-ready product

INVENTION

The application of STEM to a problem through the invention process, yielding a solution

STEM

The creation of foundational knowledge in Science, Technology, Engineering, and Math

Invention And Entrepreneurship

Kids find *ill-defined* problems to solve and/or opportunities to exploit

Ill-defined problems and opportunities require different skills to navigate the lack of clear goals, solution paths, or expected solutions

A focus on STEM alone doesn't create students with all the necessary skills imperative to companies and society at large, and leaves out a big portion of the creativity and talent available

Invention and Entrepreneurship Are Based on Personal Experiences

Traditional science fairs and engineering competitions:

- Teacher- or Mentor-Centric
- Problems defined for students and given to them – or downloaded from websites by students
- Focus is on iterative scientific and/or engineering design processes



**11-Year-Old Cancer Survivor Kylie Simonds
Invents IV Backpack – Now in Prototyping**

Invention and entrepreneur competitions:

- Student-Centric
- The problems solved are chosen by the students – and therefore are personal and meaningful to the students
- Focus is on invention and/or entrepreneurship processes

Invention and Entrepreneurship Trains Your Brain To See The World Differently



View One Child's Journey: **Chris**

2003



Kindergarten: Child Stepping Stool

2004



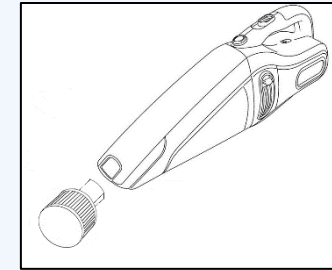
First Grade: "The Non-Spill Bowl" for kid bakers

2005



Second Grade: "Crocs By Chris" wrist protectors

2006



Third Grade: "Smoke B Gone" Dustbuster Adapter

2007



Fourth Grade: "SoftViews Covers" for florescent lights

2008



Fifth Grade: Solar-Powered USB "Sun Plug"

2009-2011



Sixth-Eighth Grade: MoxMe! School Social Networking

2012-2015



High School: "Power Camel" Multi-Battery Charging System

- Two Companies Founded
- Two Patents Filed
- \$5K in revenues so far
- At MIT Today

And They Can Change the World



<https://www.youtube.com/watch?v=-vI7m4kkmlU>



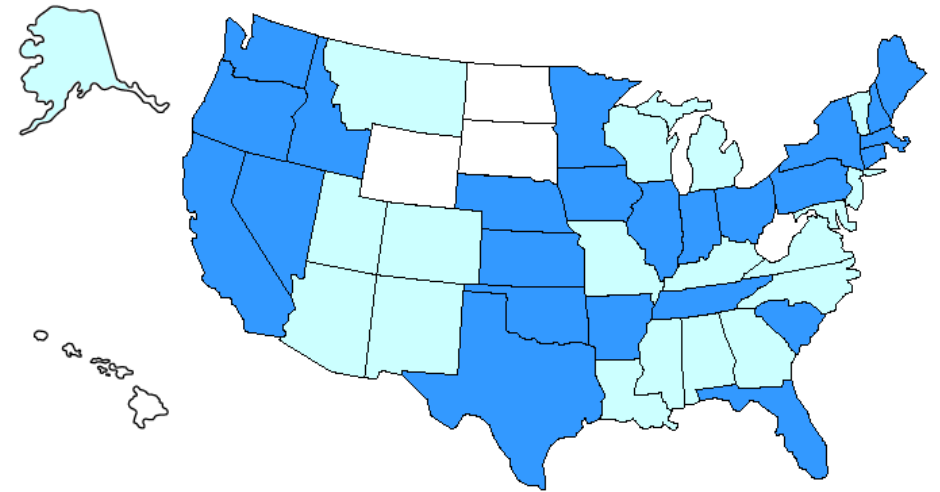
Mallory Kievman
CEO
Hiccupops, Inc.
www.hiccupops.com
Now shipping product
worldwide

Hi Mallory!

The Hiccupops arrived and have already been put to good use. My husband was a doubter, but was willing to try anything to get relief. Although the hiccups return, the pops keep him hiccup-free for over an hour and holds off the necessity to take drugs with side effects. Although I wish their effect lasted longer, we are happy for relief.

Thanks for addressing the problem. Cancer has certainly opened our eyes to this debilitating condition. We will be ordering Hiccupops again. – A customer

Local and State Invention Conventions and Entrepreneurship Programs Already Span the U.S.



There are more than 600 local invention conventions held across the nation each year

- Large district or statewide invention conventions are held in at least 24 states
- Single school-only invention conventions are held in at least 21 states
- Only 5 states have no known invention conventions today

K-12 Entrepreneurship Competitions are in all 50 states

but...

There is No National Competition to Encourage Youth Invention & Entrepreneurship

The STEMIE Coalition:

1. Provides a venue for national recognition (National Invention Convention and Entrepreneurship Exposition, NICEE) for K-12 invention and entrepreneurship
2. Provides organizational support to states where local initiatives need regional and statewide structure to enter the national stage
3. With partners, provides launch services for states where no such programs presently exist

Our goals are to have:

- All 50 states represented at the NICEE within 5 years
- More than 10 million student inventors nationwide within 5 years
 - More than 10 million student entrepreneurs within 5 years

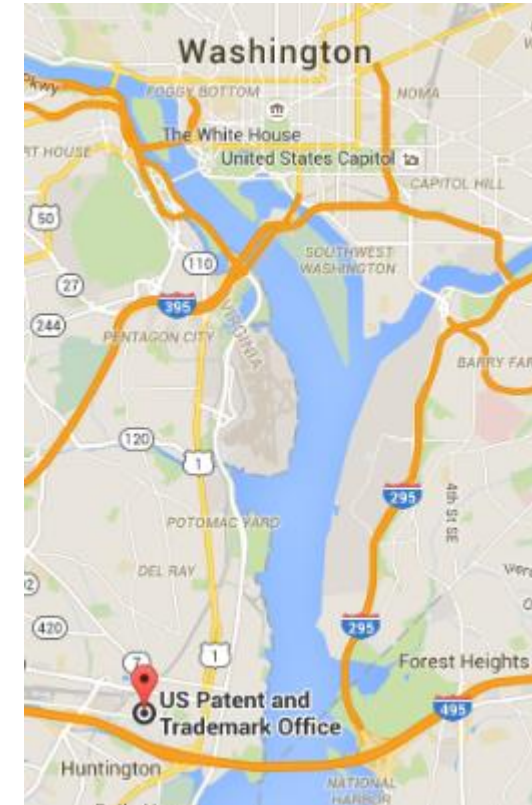
2016 1st Annual STEMIE Coalition NICEE

May 20-21, 2016

Hosted at the USPTO in Washington, DC

Dozens of state level competitions will send their best and brightest inventors to the first National Invention Convention

- ✓ **300 U.S. State K-12 Winners**
- ✓ **100 Innovative Teachers**
- ✓ **120 Judges – Engineers, Entrepreneurs, Professors**
- ✓ **~ 50%/50% Girls/Boys**
- ✓ **~ 25-30% Underserved Students**



The First National Celebration of K-12 Inventors and Entrepreneurs



The Judging Circle – The Peer Review Experience

10 inventors “pitch” to each other and ask questions; up to three judges listen and prompt for answers too; up to three winners are selected from each circle, and special awards cross all 80+ circles

Our Ask: Join Our Mission

We are looking for three levels of engagement:

1. Operating Funds: We are seeking donations
 - **Charter Supporter Package:** \$25,000
 - **Charter Investor Package:** \$100,000
2. Employee Engagement: We are seeking mentors and judges for our programs
 - Students need advice on engineering, invention, and business efforts
 - Every event needs judges
3. Outreach: We are asking you to help us find other corporate sponsors
 - 70% of our fundraising work is getting a meeting with a CMO or decision maker – can you help us?

What do you get?

1. Sponsorship Benefits
 - **Charter Supporter Package:** Year-round promoted sponsorship through electronic media, NICEE event exposure and presence (including booth space and signage)
 - **Charter Investor Package:** Above plus category exclusivity, sponsored award, elevated prominence throughout year including stage presence
2. Employee Enrichment
 - Refresh your employees with the spirit of youthful enthusiasm for engineering, invention, and entrepreneurship
 - Help bring focus on the topics that interest you by awarding winners in categories of your choosing (Charter Investor Level only)
3. Public Recognition
 - Affiliate your brand with one of the most important movements in America to keep our country on the forefront of innovation and economic growth
 - Complement STEM efforts with a program that dramatically expands America's future skilled workforce talents
 - Help make an incredibly worthwhile initiative happen

Thank You!

Contact The National Invention Convention and Entrepreneurship Expo:



Danny Briere

Chair, NICEE Organizing Committee

CEO, The STEMIE Coalition

dbriere@ctinventionconvention.org

(860) 614-3403

Additional Detail

STEMIE Coalition/NICEE Charter Sponsor Plans

		Supporter	Investor
		\$25,000	\$100,000
Media			
Print	Logo & mentions		✓
Radio	Logo & mentions		✓
TV	Logo & mentions		✓
Website	Logo & mentions	✓	Most Prominent
E-News	Logo & mentions	✓	Most Prominent
Video	Executive interview, logo & mentions		✓
Social Media	Logo & mentions		✓
Teacher/administrator newsletter	Advertisement		1/4 Page
Press Releases	Mention		✓
<i>The National Invention Convention reserves the right to edit these sponsor values at its discretion.</i>			

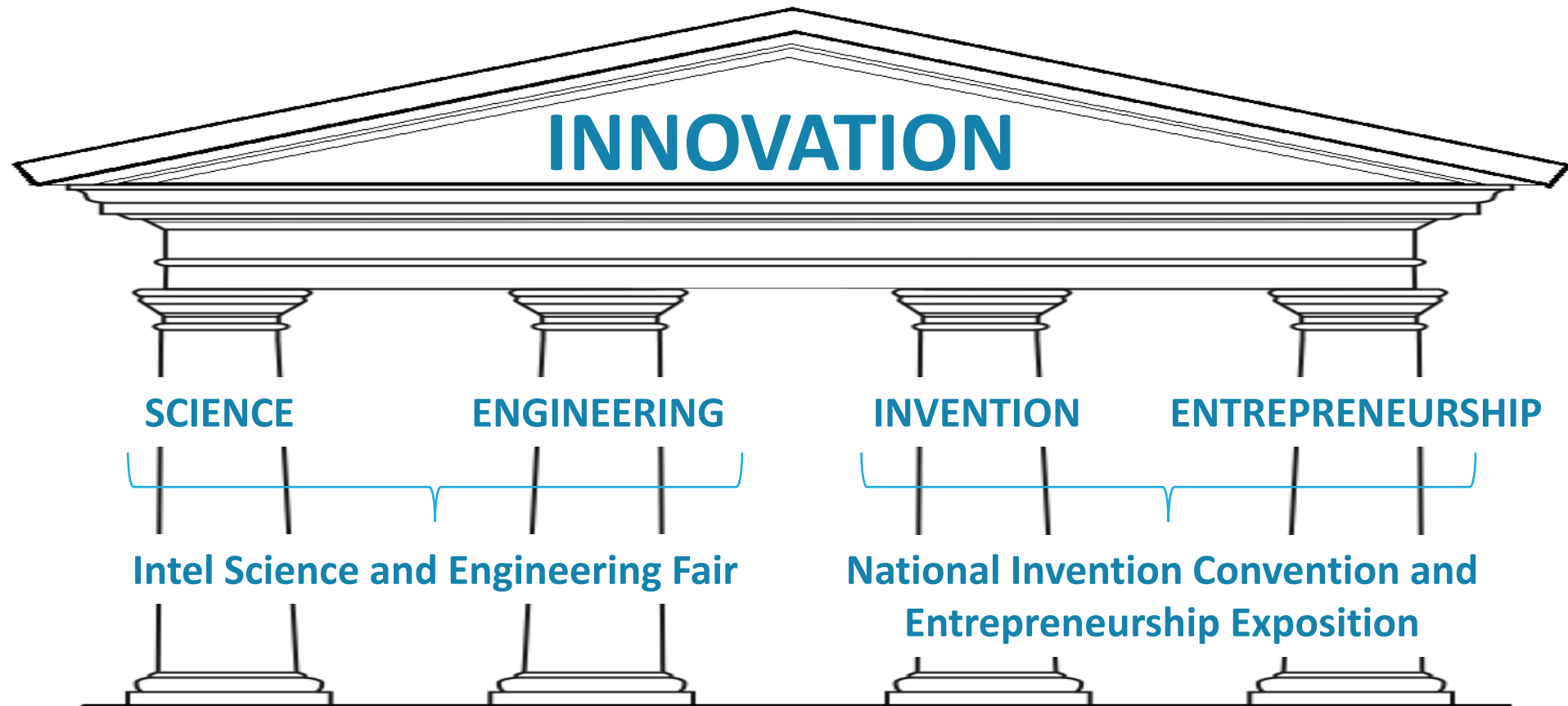
STEMIE Coalition/NICEE Charter Sponsor Plans

		Supporter	Investor
		\$25,000	\$100,000
In-Person			
National Event			
<i>Speak</i>	Welcome message or similar (1-minute)		
<i>Exhibit</i>	Booth or table display	✓	✓
<i>Award Category</i>	Create your own award category		✓
<i>Recognize Award Category Winners</i>	Representation in category winner awarding		Speaking Role
<i>Award Category Promotion</i>	Recognized in event program and webpage award category promotion		✓
<i>Event program</i>	Advertisement	1/4 Page	Full Page
<i>Goodie Bag</i>	Item inclusion	✓	✓
<i>Banner/Signage</i>	Logo (specifics depend on venue)	✓	Most Prominent
<i>VIP tickets</i>		2	8
<i>Pre-Event Expected Attendee List</i>		✓	✓
<i>Actual Attendee List Post Event</i>	All contact information provided except email	✓	✓
<i>T-shirt</i>	Logo	✓	Most Prominent
<i>Baseball cap</i>	Name		✓
<i>Access to event photos</i>	For sponsor marketing	✓	✓
<i>Press Conference</i>	Invitation to major press conferences	✓	Speaking Role
<i>The National Invention Convention reserves the right to edit these sponsor values at its discretion.</i>			

STEMIE Coalition/NICEE Charter Sponsor Plans

		Supporter	Investor
		\$25,000	\$100,000
Sponsor Support			
Industry Exclusivity			✓
Max Number of Sponsors in this Category			10
Research Support			✓
Sponsor Orientation	Event preview with special opportunity highlights	✓	✓
Sponsor Training	Participating staff training to maximize value	✓	✓
Virtual Events	Virtual event		✓
Sponsor Kit	Promotion materials and assets for sponsor use	✓	✓
First right of renewal	Until sponsorship expires	✓	✓
<i>The National Invention Convention reserves the right to edit these sponsor values at its discretion.</i>			

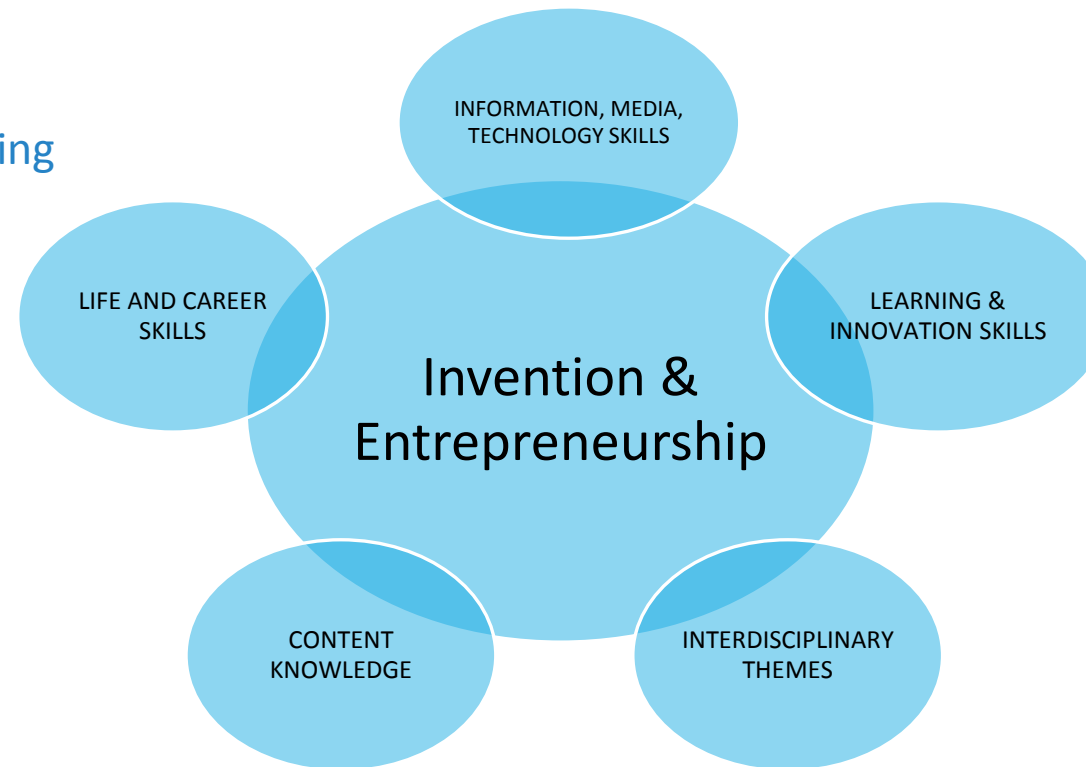
NICEE AND ISEF: Celebrating National Excellence in Innovation



Invention and Entrepreneurship Builds on STEM with New Life-Long Skills

Reinforces STEM Skillsets like:

- Well-Defined Problem-Solving
- Information Literacy
- Media Literacy
- Computer Literacy
- Team-building
- Self-Accountability
- Leadership Skills



Introduces New Skillsets like:

- Ill-Defined Problem-Solving
- Problem-Seeking
- Problem-Recognition
- Opportunity-Seeking
- Opportunity-Recognition
- Business Model Validation
- Visualization/Prototyping
- Business/Finance Content
- Executive Leadership Skills
- Ethics/Ethical Reasoning

A focus on STEM alone doesn't create students with all the necessary skills for companies and society at large, and leaves out harnessing a big portion of the creativity and talent available

Critical Problem-Solving Skills Can Be Taught In Different Ways

STEM

Today's Traditional Project-Based Learning Common in STEM Programs:

Kids are given *well-defined* problems to solve in structured environments

- Robotics Competitions
- Science Kits
- Classroom Lab Experiments

Well-defined problems have specific goals, clearly defined solution paths, and clear expected solutions

Invention And Entrepreneurship

Invention and Entrepreneurship-Driven Project-Based Learning:

Kids find *ill-defined* problems and/or opportunities to solve or exploit

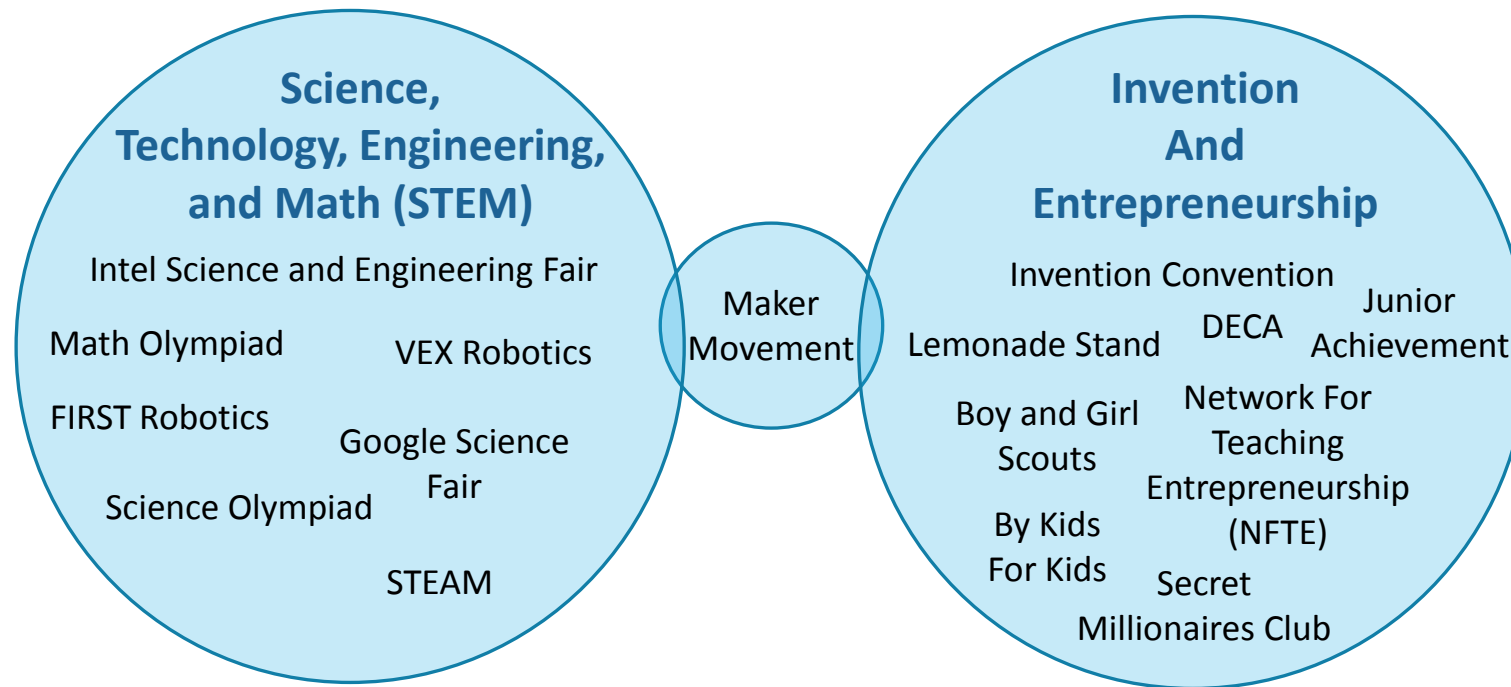
- Problems they have at home or school
- Ideas for a new business in their town
- IP that comes out of the invention process

Ill-defined problems and opportunities require different skills to navigate the lack of clear goals, solution paths, or expected solutions

Both forms are needed for training our students in life-long problem-solving skills

Extending The Promise of STEM

Today, STEM is practically separated from Invention and Entrepreneurship



We need a full-cycle framework to complete the promise of STEM, and to elevate critical invention and entrepreneurship skills teaching in America's K-12 future workforce

Example: Connecticut Invention Convention

2014-2015 Connecticut Invention Convention (CIC) By The Numbers:

- 15,000+ new students in training every year
- 52% of students are girls
- 24% of students are minority students
- 50+ students are homeschooled
- 225 Schools Served
- 700+ teachers
- 94 Towns
- 195 Local Invention Conventions
- 18 City-wide Invention Conventions
- 1 State Finals Invention Convention
- 350 Finals Student Award Winners
- 6,000+ people attend the Finals in Storrs, CT
- 500+ volunteer judges, mentors
- More than 350,000 student inventors over 32 years
- \$150 per year is what schools pay to take part, for unlimited students

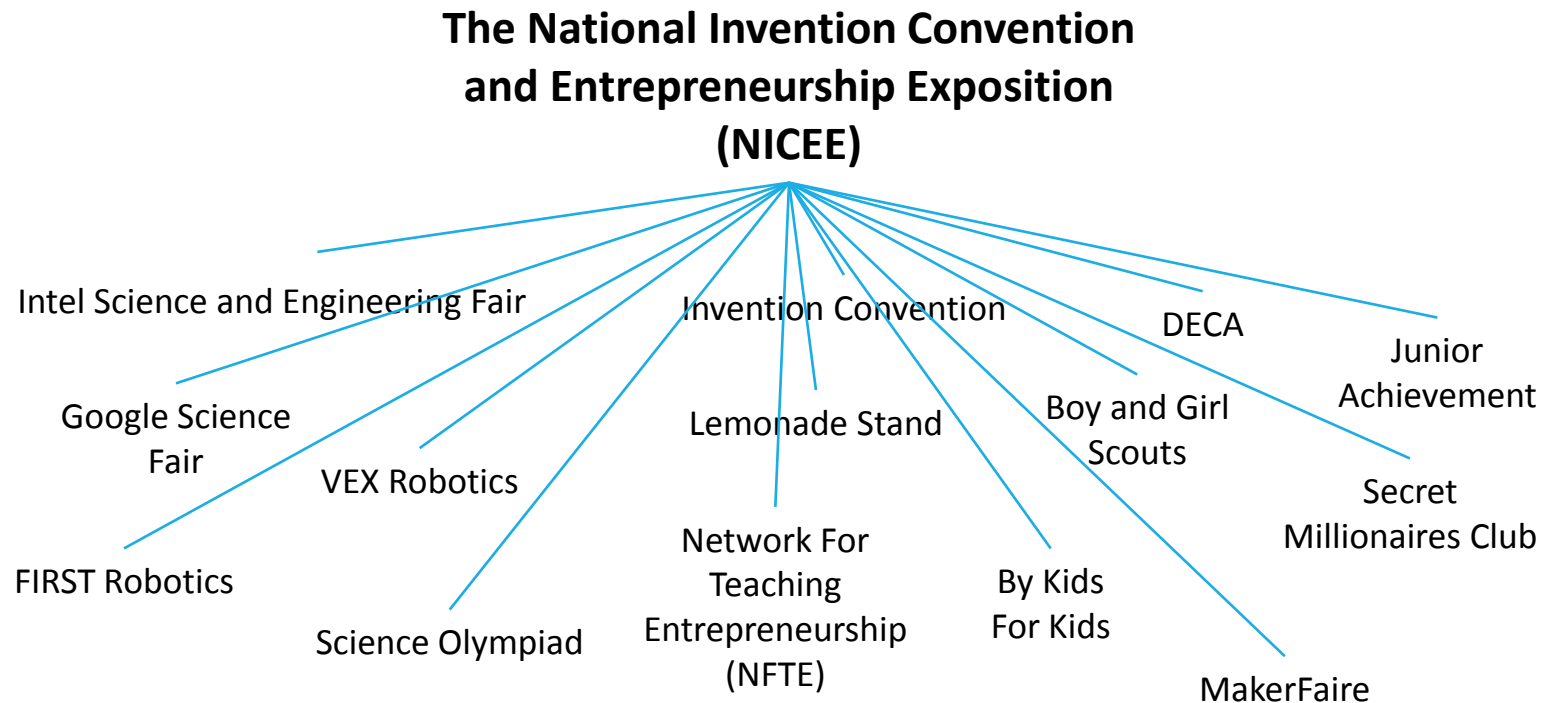
Each state will have one or more “affiliates” like Connecticut’s Invention Convention that drive this into the local school and partner systems



The Connecticut Invention Convention Finals Event

More than 6,000 people attend, including 400+ judges from around the state

NICEE Seeks to Celebrate The Best from America's Invention and Entrepreneurship Programs



World Class Steering Committee

Experts in Invention Education/Competitions are launching the first National Invention Convention

Name	State	Role	Organization
Danny Briere	US	Executive Director, The STEMIE Coalition	The STEMIE Coalition
Helen Charov	CT	Executive Director	Connecticut Invention Convention
Susan Mostowy	CT	Associate Director	Connecticut Invention Convention
Sonya Richmond	CT	Boardmember, Former President	Connecticut Invention Convention
Bill Kenney	CT	CEO	Test My Pitch
Susan Amat	FL	Founder/CEO	Venture Hive/Venture Prep (Miami, FL)
<i>Aura Prata</i>	<i>FL</i>	<i>Susan Amat's Assistant</i>	<i>Venture Hive</i>
Dawn Bowlus	IA	Director	Jacobson Institute for Youth Entrepreneurship-U of Iowa
Leslie Flynn	IA	Professor of Science Education	University of Iowa
Lori Ihrig	IA	Supervisor for Curriculum and Instruction, University of Iowa Belin-Blank Center for Gifted Education and Talent Development	Invent Iowa
Anneliese Gegenheimer	IL	Executive Director	Chicago Student Invention Convention (Illinois)
Mary Price	MA	Director, Center for Pre K - 12 Educational Outreach, Bridgewater State University	Massachusetts Invention Convention
Sheldon Apsell	NH	Chairman of the Board & CEO, Academy of Applied Science	NH Young Inventors' Program
Kathie McIntyre	NH	Library/Media Specialist, Clark-Wilkins School	NH Young Inventors Program
Nicole MacMillan	NH	Program Director	NH Young Inventors Program
Veronica Lynagh	OH	Executive Director	Ohio Invention Convention
Cheryllyn Rushton	OH	Former Executive Director	Ohio Invention Convention
Betty J.C. Wright	OK	Rose State University Regents Chairman	Oklahoma Student Inventors Exposition
Abbie Oetzel	SC	Sales Coordinator and Invention Convention Director for iHeartMedia	Duke Energy Invention Convention (South Carolina)
Tracey Huddleston	TN	Director, Initial Licensure Program, Dept. of Elementary and Special Education, Middle Tennessee State University	Tennessee Invention Convention

Corporate Engagement: UTC

UTC employees engage with the Invention Convention as judges, mentors, and visionaries!

UTC judge, Jean Pierre Dionne, pictured here with a young inventor



Dave Carter, VP Engineering, UTAS, giving 2010 keynote



UTC Judge Jeanne Pierre Dionne and inventor Zoe Eggleston and Lt. Gov. Nancy Wyman

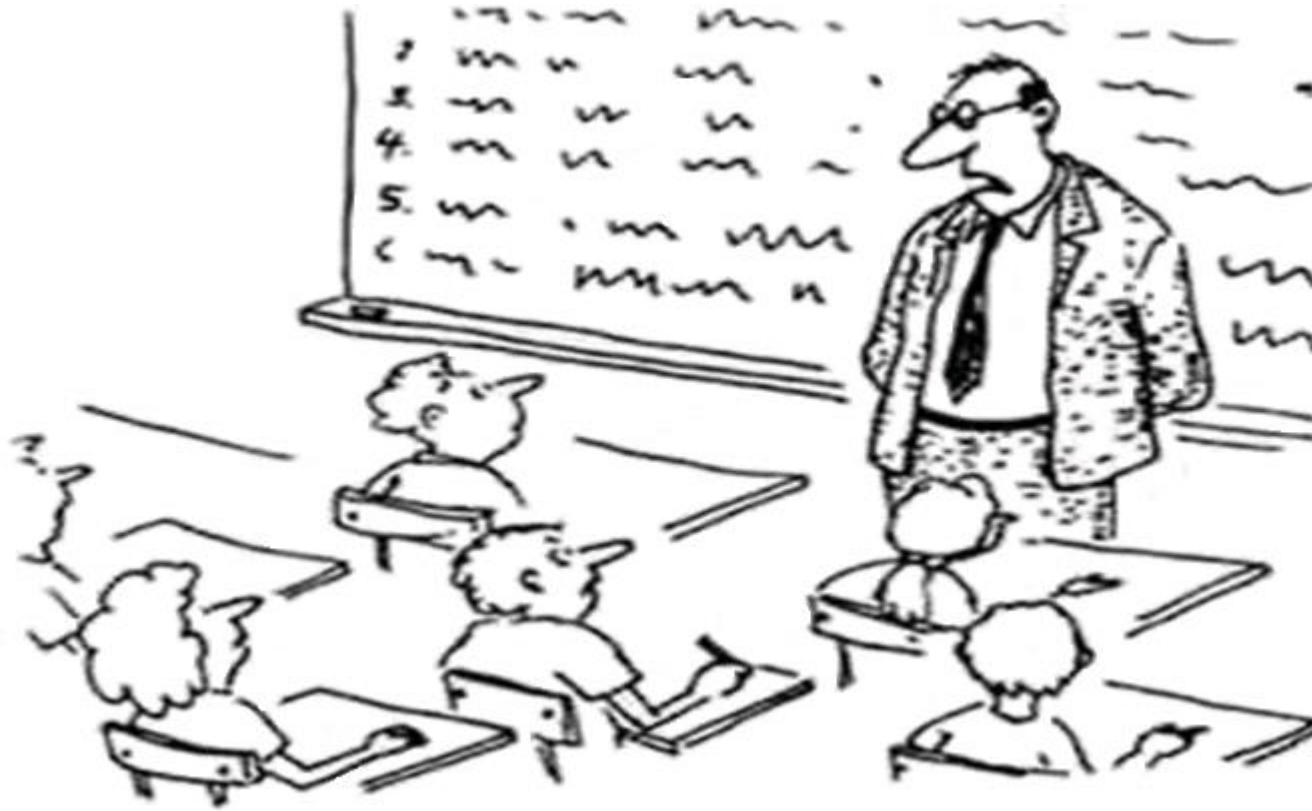


UTC honored for 25 years with CIC! James Morgia, Sikorsky Peter Leibfried, Pratt & Whitney Rep. Gregory Haddad, 54th district



Over 27 years, UTC judges have judged more than 27,000 student inventions!

We need to empower students as learners



“I expect you all to be independent, innovative, critical thinkers who will do exactly as I say!”

Source: Phi Delta Kappan, 71(1), 38