



CONNECTICUT INVENTION CONVENTION

March 6, 2014

imagination in play

To: Members of the Commerce Committee, Connecticut General Assembly

This letter, and my public testimony today, are in support of HB 5403, requesting that the Connecticut Invention Convention, (CIC) a 501c3 non profit education organization, be funded with a **\$100,000** appropriation in the state budget for 2014-2015 for expansion of its award-winning STEM educational programs in Connecticut.

- CIC is on a rapid **expansion path of 34% growth** in schools and needs capacity building to continue
- **Matched 3:1 by Connecticut corporations** and foundations, funding will be used to provide more programs for young inventors and their families, including increases for women and minorities
- CIC is the **longest continuously operating program of this kind in the nation, serving the greatest number of children**, dedicated to teaching invention and innovation to Connecticut students
- CIC is an integral part of **Connecticut's "Innovation Ecosystem"** by providing instruction and fostering interest among its youngest inventors and innovators, and filling the pipeline early for workforce development in science, technology, engineering and math (STEM).

The demands for global competitiveness will **require more qualified knowledge workers adept at applying problem-solving skills to cutting-edge technological development, engineering design and prototyping, critical thinking, and presentation and promotion of new ideas and innovations.** Nowhere is that more apparent than in Connecticut, which prides itself in being home to inventors, entrepreneurs and technology leaders who do not just envision the future, they create it. However, the training of next generations will directly affect our state in the race to the fastest and best developments on the national and global stage.

In no other state than Connecticut is there a true k-12 continuum of educating this next generation of innovators – Connecticut stands alone in this accomplishment with phenomenal results:

- More than **10,000+ students in grades k-8** participate annually in school-based programs in 168 schools, in more than half of Connecticut towns. This is 10 times the next largest program in the US.
- In the past year, **CIC programs have grown by over 34%** thanks to private sector support from corporations such as UTC, Northeast Utilities, Stanley Black & Decker and others.
- More than **54% of CIC inventors are girls**, whose interest in STEM continues into college.
- **Up to 25% are young inventors from under-represented minorities** in urban areas, for whom this is a life changing experience for their future educational and career aspirations.
- **CIC programs are considered "best in class" by CT Academy of Science and Engineering (CASE)** which annually participates in the program and recognizes middle school inventors
- **CIC programs are recommended by the CT State Department of Education**, as programs in alignment with the federal Next Generation Science Standards, to be adopted in CT in 2015.
- **CIC has been evaluated and proven** to encourage interest in STEM subjects in high school.

The CIC is uniquely positioned to continue its expansion of programs to more schools and more students, and participate more fully in Connecticut's "Innovation Ecosystem" in this model.

In order to expand its programs for all K-12 students in Connecticut, and truly provide the opportunity for "every child, in every school, to become an inventor once, better twice," the CIC must broaden its operational support. Currently CIC raises funds from more than two dozen Connecticut corporations and foundations:

- **Northeast Utilities Foundation has committed to a 3-year \$225,000 grant** to assist CIC with expansion of its "Next Step Inventors Program," matched in part by Stanley Black & Decker.
- **UTC has been a corporate supporter for 25 consecutive years.**
- **University of Connecticut School of Engineering has been CIC's partner for 15 years and hosts the annual finals event.**
- **A grant from CTNext.com has been secured to develop a resource guide for young inventors and their parents to provide guidance in patenting, licensing, manufacturing and marketing products, in English and Spanish.**

The current request to the CGA for \$100,000 in HB 5403 , which would be matched 3:1 by corporate support from existing and new sources, will be used to provide an annual base for operational funding. With sustained 34% growth in schools:

- The CIC has outgrown its capacity to support a rapidly expanding program benefitting the state.
- CIC must move to a regional strategy to provide teacher training, mentoring, support and events in all four corners of the state.
- Funding will help CIC develop and implement a plan to become more self-sustaining with product sales, curriculum offerings, and webinars.

With operational funding, CIC can more **fully develop programs for its "Next Step Inventors" and their families**, which may not immediately affect job growth in Connecticut, but will build on the premise that entrepreneurship skills in all areas -- technology, retail, financial services, health care -- are worth learning and applying to improve enterprises everywhere. Earlier CIC inventors, now in their 30's and 40's and managing businesses, are proof positive of that long term investment.

In 2008, a \$150,000 grant from the Connecticut General Assembly fueled the turnaround of the CIC and set it on a course for more than tripling its school participation rate in the last 5 years. Funding is needed now to move the CIC to another level of operations which will assure its continuation and effectiveness in creating a much needed pipeline of STEM professionals and entrepreneurs.

The next generations of CIC inventors and entrepreneurs represent our best hope not only for our state to continue to "innovate" into the future, but to solve the problems that lie ahead for all of us in the 21st Century.

Please give HB 5403 your strongest consideration.

Sincerely,



Helen Charov
Executive Director

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Offices at 20 Church Street, Hartford thanks to the generosity of Cantor Colburn, LLP



SCHOOLS PARTICIPATING IN THE CIC IN 2014

CITY	SCHOOL		
Ashford	Ashford School	Easton	Samuel Staples Elementary School
Avon	CREC Reggio Magnet School of the Arts	Enfield	Edgar H Parkman School
	Talcott Mountain Academy		Edu. Res. for Children, Enfield Str. Sch.
Baltic	Sayles School		Edu. Resources for Children, JFK MS
Bethany	Bethany Community School		Eli Whitney School
Bethel	Bethel Middle School		Enfield Child Development Center
	Frank A. Berry School		John F. Kennedy Middle School
	Rockwell School	Fairfield	Prudence Crandall School
Bloomfield	CREC Academy of Aerospace and Engin.		Dwight Elementary School
	CREC Metropolitan Learning Center		Our Lady of the Assumption
	CREC Museum Academy	Falls Village	Lee H. Kellogg School
	Hebrew Academy of Greater Hartford	Farmington	Irving Robbins Middle School
Bridgeport	Interdistrict Discovery Magnet School	Fishers Island	Fishers Island School
Bristol	Ivy Drive School	Glastonbury	CREC Glastonbury-E. Hartford Mag. Sch.
Brooklyn	Brooklyn Middle School	Hamden	Saint Rita School
Canton	Canton Intermediate School		Spring Glen School
Centerbrook	Essex Elementary School	Hartford	Achievement First Hartford Elementary School
Cheshire	Norton School		Annie Fisher STEM Magnet School
Chester	Chester Elementary School		Betances STEM Magnet School
Clinton	Abraham Pierson		CREC Discovery Academy
Colchester	Jack Jackter Intermediate School		CREC Montessori School
Columbia	H.W. Porter School		Hartford Magnet Trinity College Acad.
Coventry	Capt. Nathan Hale Middle School		Jumoke Academy Honors
Cromwell	Cromwell Middle School		Noah Webster MicroSociety Mag. Sch.
	Woodside Intermediate School		The Renzulli Academy
Danbury	Broadview Middle School		Wilson Gray YMCA Youth Ach. Prog.
	Great Plain Elementary School	Hebron	Hebron Elementary School
	Hayestown Avenue School	Kensington	Mooreland Hill School
	Hudson Country Montessori School	Kent	Kent Center School
	Pembroke Elementary School	Lakeville	Indian Mountain School
	Rogers Park Middle School		Salisbury Central School
	Saint Joseph School	Lebanon	Lebanon Elementary School
	Shelter Rock School	Madison	Our Lady of Mercy
	South Street Elementary School	Mansfield Cntr	Mansfield Public Schools
	Stadley Rough Elementary School	Meriden	Lincoln Middle School
	Western CT Academy of Intrntnl Studies		Saint Joseph School
Deep River	Deep River Elementary School		Thomas Edison Middle School
East Granby	Carl Allgrove Elementary School	Middlefield	Memorial School
	East Granby Middle School		The Independent Day School
	R.D. Seymour School	Milford	Boys & Girls Club of Milford
East Haddam	Middlesex Cnty Science & Tech. 4H		East Shore Middle School
East Hampton	Center Elementary School		Harborside Middle School
East Hartford	CREC Two Rivers Magnet Middle School		Milford Public Library/Milford Edu. Fndtn
	Robert J. O'Brien STEM Academy		West Shore Middle School
			Woodruff Family YMCA

Moodus	Nathan Hale-Ray Middle School	Wallingford	Dag Hammarskjold Middle School
Mystic	S. B. Butler Elementary School		James H. Moran Middle School
N Franklin	Franklin School		Parker Farms Elementary School
Naugatuck	Cross Street Intermediate School		Pond Hill Elementary School
	Hillside Intermediate School		Rock Hill Elementary School
New Haven	Mauro Sheridan Inter-district Mag. Sch.		Yalesville Elementary School
	Ross Woodward Class. Stud Mag. Sch.	Washington Depot	Washington Primary School
New London	Jennings School	Waterbury	Carrington School 21st Cent. Program
	Nathan Hale School		Wallace Middle School
New Milford	Hill and Plain Elementary School		Judson School
Newington	John Wallace Middle School	West Hartford	CREC University of Hartford Magnet School
Newtown	Newtown Middle School		Smith STEM School
	St. Rose School		Solomon Schechter Day Sch. of Grtr Htd
N. Stonington	North Stonington Elementary School	Westbrook	Daisy Ingraham School
N. Windham	Charles H. Barrows STEM Academy		Westbrook Middle School
Northford	Totoket Valley Elementary School	Westport	Long Lots Elementary School
Norwich	Veterans Memorial School	Willington	Hall Memorial School
Oakville	Polk Elementary School	Windsor	Clover Street School
Old Lyme	Center Elementary School		CREC Medical Prof. & Tchr. Prep Acad.
	Lyme Old Lyme Middle School		John F. Kennedy School
	Lyme-Consolidated Elementary School	Wolcott	Alcott School
Plainville	Frank T. Wheeler Elementary School		Frisbie School
Plantsville	Plantsville Elementary School		Wakelee Elementary School
Plantsville	South End Elementary School	Woodbridge	Ezra Academy
	Strong Elementary School	Woodstock	Woodstock Elementary School
Pomfret Cntr	Pomfret Community School		
Prospect	Community School		
Ridgefield	Branchville Elementary School		
Rocky Hill	West Hill School		
Shelton	Shelton Intermediate School		
Simsbury	Hartford County 4H		
Somers	Somers ES QUEST Program		
South Windsor	CREC International Magnet School		
Southington	Derynoski Elementary School		
	Flanders Elementary School		
	Hatton Elementary School		
	Kelley Elementary School		
	Thalberg Elementary School		
Stafford	St. Edward School		
Stamford	Davenport Ridge Elementary School		
	K.T. Murphy Murphy Academy		
	Roxbury Elementary School		
Storrs	Mansfield Middle School		
Stratford	Stratford Academy		
Tariffville	Tariffville Elementary School		
Torrington	Torrington Middle School		
Trumbull	Booth Hill School		
	Daniels Farm School		
	Frenchtown Elementary School		
	Jane Ryan School		
	Middlebrook School		
	Tashua Elementary School		
Vernon	Center Road School		
	Skinner Road School		



Next Step Inventors

www.CTInventionConvention.org

CIC has become increasingly involved with our own young inventors and entrepreneurs who are ready to take their inventions to the “next step” of patenting, development and possibly market entry. CIC inventors are being identified for full legal support of patent search and filing and are asked to present at angel investor forums. They have had business plan support and local and national publicity.



14-year old **Mallory Kievman** invented “*Hiccupops*” a “neutraceutical” to retard or stop hiccups. Now she has her own company and is setting up manufacturing for her production run. Hiccupops provide benefits to oncology patients who suffer hiccups during cancer therapy. Candy sales, too!

See her video here:

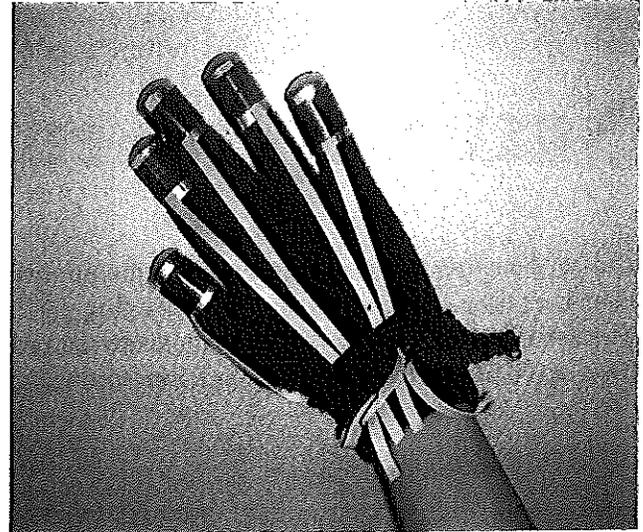
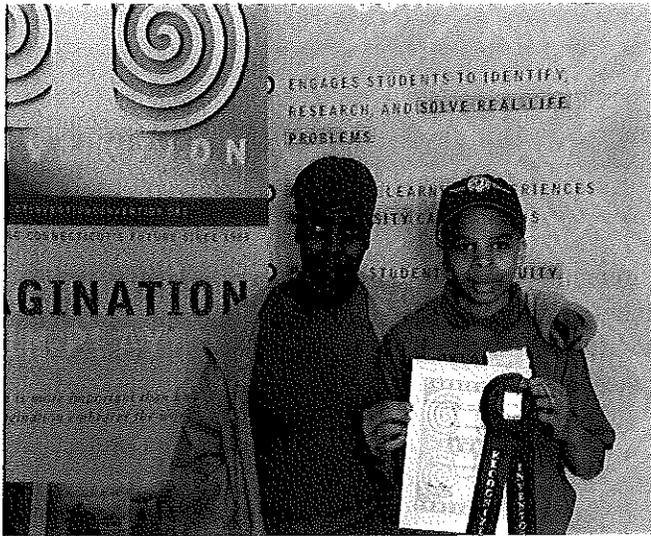
<http://vimeopro.com/blindsociety/hiccupops>

Hannah Pucci, a 2012 CIC Recognized Inventor and winner of the Whole Foods Sponsor Award, is seen here addressing a group convened by CTNEXT at the Travelers Golf Championship. Hannah is now working with Innovation East and UConn Business School to formulate a business plan to commercialize her product, “Egghead Ice Cream,” a new way to serve ice cream in preformed scoops. Looking on are Casey Pickett, Director of Innovation, DECD, Christine Castonguay, Brand Director for the State at DECD, and Commissioner of the DECD, Catherine Smith.

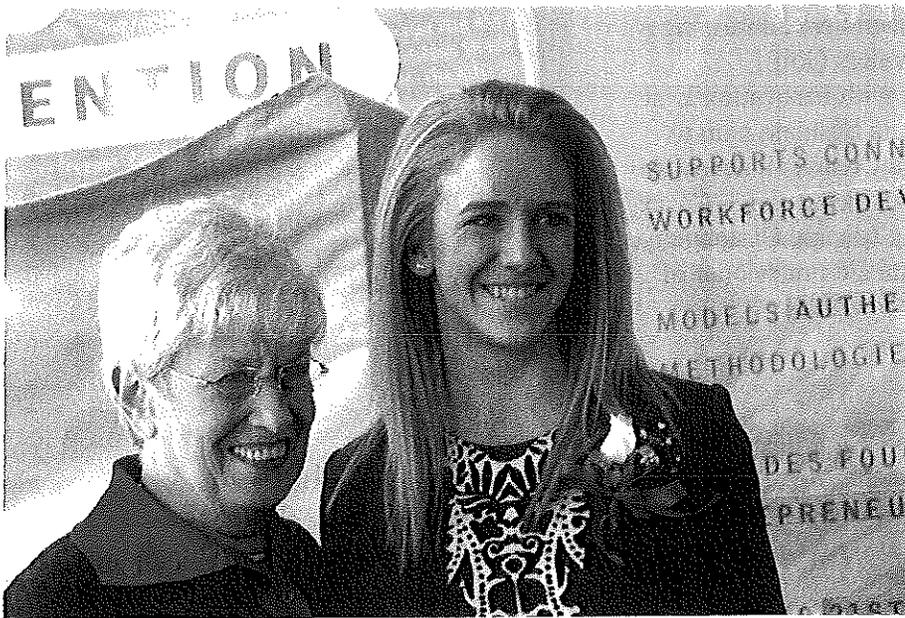


CIC inventor **Gabriel Mesa**, from Canton Intermediate School, has been developing methods of controlling sleep apnea with ferrous implants and magnetic collars. Gabe was a finalist at the 3M Young Scientists competition and has been approached by the National Institutes of Health regarding his inventions.





Nolan Pimentel, a first time inventor from Waterbury's Wallace Middle School, identified this problem to solve: arthritis in his grandmother's hands, requiring exercise. His solution was a glove with weights at the end of the fingers. He described its use: "You put your hand inside the glove and keep opening and closing your hand." Nolan is pictured here with his mother.



Zoe Eggleston congratulated by Lt. Governor Nancy Wyman in November, 2012, on the granting of a patent to Zoe for her invention to measure the thickness of ice. Zoe participated as an 8th grader in the CIC program. Three years later, she was granted a patent and a scholarship to study mechanical engineering at Worcester Polytechnic Institute.

Connecticut Invention Convention Expands to Create Next Gen Innovators

October 4, 2013 - Photo Credits Sujata Srinivasan

Thomas Edison said, "If we all did the things we are really capable of doing, we would literally astound ourselves...." For kids in the Connecticut Invention Convention program, now poised to expand through corporate grants, becoming inventors and entrepreneurs seems to be all in a day's work.



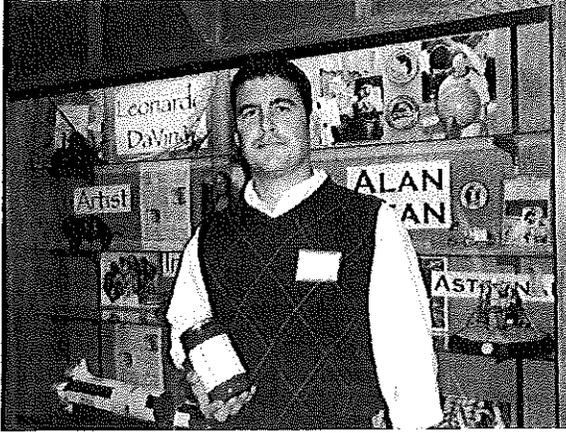
On a beautiful Fall Saturday at the Talcott Mountain Science Center in Avon, teachers from Connecticut schools tinkered with gadgets at a teacher-training workshop, run by the Connecticut Invention Convention (CIC). Susan Prihar, a science teacher from Soloman Schechter Day School in West Hartford, said she's learning to help students identify things that can be improved. "I think that there's an intelligent and organized way to present that, so that kids can buy into it; because that's really a hard part," she explained. "It's to present to students: You can change the world and have them believe it. And this program is fantastic to do that."

Mallory Kievman, a tenth grader from Windsor, believes she can change the world by stopping one hiccup at a time. "I got them close to everyday," she said. "So I got into researching the old wives tales and I came upon three that worked for me. Lollipop can help stop your hiccups: [it's made with] apple cider, vinegar and sugar. So combining the three is pretty much what I did!" Kievman wants to file for approval from the U.S. Food and Drug Administration to sell her lollipop to patients on dialysis and to cancer patients suffering from hiccups, as a result of chemotherapy.



Like Kievman, third grader Ella Rogerson from East Haddam had a problem that required a solution. "I was at this restaurant that I had hot dogs," she said. "And when I started eating the hot dog bun, the bottom of the bun broke in half, so the bun wouldn't be like, secure anymore." Ella's brother Jack Rogerson, a seventh grader at Nathan Hale-Ray Middle School, had a creative idea. "This is the Round-A-Bun. It's a tubular hot dog bun," he explained. "The main thing about it is that it prevents bun tearing. It also prevents losing your toppings, getting them all over your clothes [and] your face." Shaped like a tube, the bun is sealed on one end and is made by using standard plumbing supplies.

Students like Rogerson and Kievman say they couldn't have done it without their teachers. Shannon Karlowicz teaches fifth grade at Seymour school in East Granby and it's the third year she's been with the CIC. "I think the most exciting piece is that it really does allow them to bring their own passions and their own interests into it," she said. "So some children are inventing things that have to do with cooking and creating food or storing food and some people are creating things that have to do with sports or a specific interest they have outside of school."



That's exactly how Robertson Michaud became an inventor. His passion for drums led him to create a drumstick apparatus in fifth grade for the CIC annual competition. Then five years ago, coming up on his 30th birthday, he turned his other passion into a business, launching Michaud Pasta Sauce. The CIC program is expanding now from a Northeast Utilities Foundation grant of \$225,000 and a matching grant from Stanley Black & Decker. And Michaud is setting up an after-school club for children in Simsbury. He said, "One of the aspects that the invention convention provides is allowing the children to speak publicly, and give almost a sort of a sales pitch about their invention, which really applies to what I have to do on an almost daily basis with my product line today. So it gives them a lot more than just inventing."

Also, teachers said, children with special needs come up with the most creative solutions. "It's often not the smartest kid in the class. It's not the kids that have the highest IQ. It's kids with special needs," said Jim Griffin, who teaches grades 2-5 at Somers Public Schools. "So [they're] genius not in IQ, but you see it in the gift of being able to work with their hands and having an idea."

The grants will help CIC to reach out to 200 schools, from nearly 135 currently. Demetrios Giannaros, CIC board member and an economist, said the 10,000 children participating in the invention convention are Connecticut's future. "In order for us to continue to be the number one per capita income state in the country and perhaps one of the top in the world, we have to create new products [and] new ideas," he pointed out.

Now in its 31st year, CIC has helped create patent-holding inventors and entrepreneurs who started young. For more information about the program and how to participate, visit ctinventionconvention.org.



Connecticut Invention Convention

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