



Club Invention®

FLEXIBLE STEM PROGRAMMING

FOR GRADES 1-6



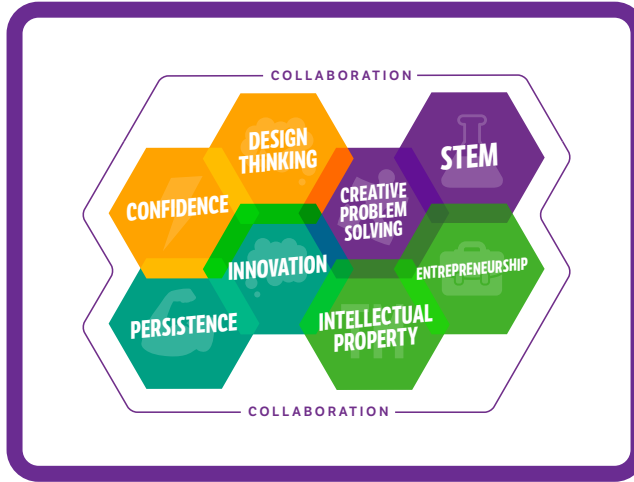
A NATIONAL INVENTORS HALL OF FAME® EDUCATION PROGRAM

TABLE OF CONTENTS



CLUB INVENTION OVERVIEW

PAGE 3



I CAN INVENT MINDSET

PAGE 4

CLUB INVENTION MODULES

BOLDER BUILDERS™
Children join an engineer, architect and builder to restore a town by designing, creating and testing structures including shelters and bridges.

- Creative Problem Solving
- Innovation
- STEM

E.Z. SCIENCE™
To help a famous science magazine develop solutions to everyday problems, children create games, conduct experiments and solve puzzles.

- Entrepreneurship
- Innovation
- STEM

PASSAGE TO PLANET ROO™
Traveling to a distant planet, children apply teamwork and creative problem solving to develop devices that will help them succeed in space.

- Confidence
- Creative Problem Solving
- Design Thinking

SOS: ENDANGERED EARTH™
Investigating ecology and discovering threats to animal habitats, children design safe spaces for wildlife from black bears to birds.

- Confidence
- Design Thinking
- Persistence

WHEEL OF INVENTION™
By teaming up to take on entrepreneurship challenges, children build nature-inspired prototypes and provide real-world solutions.

- Entrepreneurship
- Design Thinking
- Confidence

CASTLES, CATAPULTS AND COATS OF ARMS™
Working together to explore science and medieval history, children take on roles from knights to craftspeople and engage in hands-on creativity.

- Confidence
- Design Thinking
- STEM

FLIGHT SIGHT™
Children learn how flight innovations provide new perspectives as they invent ways to jump higher, fly giant paper planes and create 3D maps.

- Creative Problem Solving
- Intellectual Property
- Persistence

PHYS. ED: PHYSICS IN MOTION™
Children explore the laws of gravity, energy, motion and magnetism as they create games based on the work of famous physicists.

- Confidence
- Persistence
- STEM

TRASH ISLAND: A GARBAGE PATCH JOURNEY™
Children take on ocean research challenges and apply creative thinking to address the buildup of trash in the North Pacific Central Ocean Gyre.

- Confidence
- Design Thinking
- Innovation

Learn more about Club Invention [here](#).

MODULE OVERVIEWS

PAGE 5



WHAT'S INCLUDED

PAGE 15

CLASSROOM SET PRICE PER UNIT	
1-5 UNITS	\$1,000
6-11 UNITS	\$900
12+ UNITS	\$800

PRICING

PAGE 16

Trash Island: A Garbage Patch Journey™

CURRICULUM EXCERPT
View a sample of our curriculum to see how we provide detailed guidance for easy-to-implement program experiences.

PROVEN BENEFITS OF NIHF EDUCATION PROGRAMS
Learn more about the proven benefits of participating in NIHF education programs

NATIONAL DISTRICT LIST
View some of our district partners across the country.

APPENDIX

PAGE 18



IMMERSIVE INVENTION EDUCATION

Club Invention® makes it easy to create an afterschool environment that promotes critical and creative thinking. Children gain insight and inspiration while finding opportunities to take risks and develop new ideas. These experiences empower children to thrive as problem solvers in their own lives and in the world around them. The Club Invention modules each contain eight, one-hour units and incorporate a wide range of subject areas through purposeful, hands-on exploration.

“
The kids **CULTIVATE THEIR CREATIVITY**, work on their strengths, are stimulated with new experiences, learn to work in groups, learn new educational concepts **AND HAVE FUN AT THE SAME TIME.**
”

MARIA L., VISTA, CALIFORNIA

INNOVATIVE EXPERIENCES

- Research-based curriculum allows teachers to facilitate with confidence
- Open-ended exploration promotes creativity and builds 21st-century skills
- Challenges empower children to use their imagination, build functioning prototypes and make their thinking visible
- Job-embedded professional development helps educators cultivate an innovative mindset

FLEXIBLE CURRICULUM

- A variety of modules provides a wide range of subject areas
- Aligned to state, Common Core and Next Generation Science Standards
- Units can be bundled or purchased individually to align with various schedules and time frames

ESSENTIAL LIFE SKILLS

- Stories and materials guide children to experience empathy and advance their capacity for civic responsibility
- Activities encourage child-led learning through the invention of new ideas and exploration of ways to share them with others

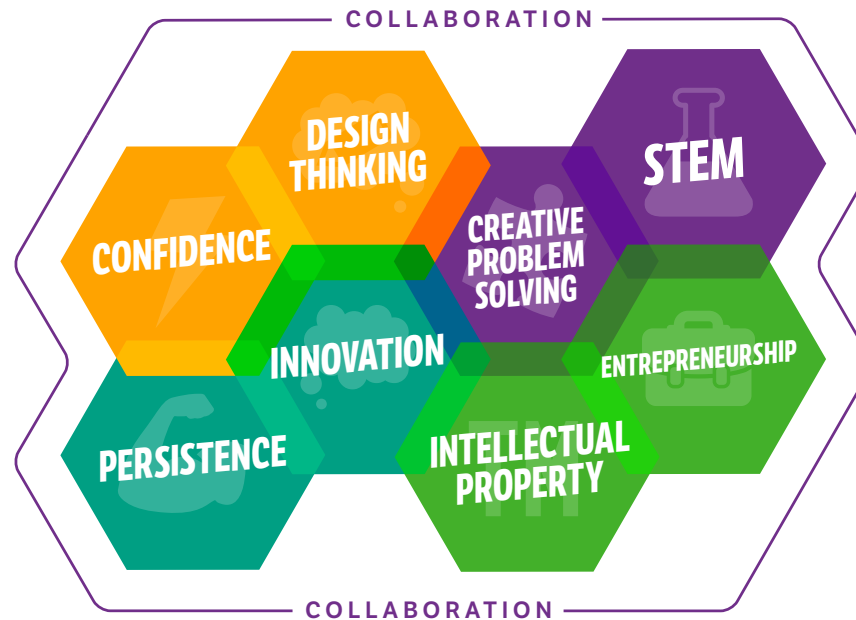
TURNKEY IMPLEMENTATION

- Step-by-step curriculum guide
- All-inclusive materials packed in classroom sets
- Dedicated National Inventors Hall of Fame® support

Learn more about Club Invention [here.](#)

THE I CAN INVENT MINDSET

All National Inventors Hall of Fame education programs are built on the belief that every child can invent. Through open-ended, hands-on exploration, children build the I can Invent® Mindset — a growth mindset infused with lessons from world-changing inventors — that enables and empowers them in all areas of their lives.



The I Can Invent Mindset is made up of nine essential skills and traits that are strengthened every time a child applies them. Each Club Invention module highlights different aspects of this mindset, guiding children to unlock their full potential and discover the power of their own creativity.

CLUB INVENTION MODULES



BOLDER BUILDERS™

Children join an engineer, architect and builder to restore a town by designing, creating and testing structures including shelters and bridges.

- ◆ Creative Problem Solving
- ◆ Innovation
- ◆ STEM



E.Z. SCIENCE™

To help a famous science magazine develop solutions to everyday problems, children create games, conduct experiments and solve puzzles.

- ◆ Entrepreneurship
- ◆ Innovation
- ◆ STEM



PASSAGE TO PLANET ROG™

Traveling to a distant planet, children apply teamwork and creative problem solving to develop devices that will help them succeed in space.

- ◆ Confidence
- ◆ Creative Problem Solving
- ◆ Design Thinking



SOS: ENDANGERED EARTH™

Investigating ecology and discovering threats to animal habitats, children design safe spaces for wildlife from black bears to birds.

- ◆ Confidence
- ◆ Design Thinking
- ◆ Persistence



WHEEL OF INVENTION™

By teaming up to take on entrepreneurship challenges, children build nature-inspired prototypes and provide real-world solutions.

- ◆ Entrepreneurship
- ◆ Design Thinking
- ◆ Confidence



CASTLES, CATAPULTS AND COATS OF ARMS™

Working together to explore science and medieval history, children take on roles from knights to craftspeople and engage in hands-on creativity.

- ◆ Confidence
- ◆ Design Thinking
- ◆ STEM



FLIGHT SIGHT™

Children learn how flight innovations provide new perspectives as they invent ways to jump higher, fly giant paper planes and create 3D maps.

- ◆ Creative Problem Solving
- ◆ Intellectual Property
- ◆ Persistence



PHYS ED: PHYSICS IN MOTION™

Children explore the laws of gravity, energy, motion and magnetism as they create games based on the work of famous physicists.

- ◆ Confidence
- ◆ Persistence
- ◆ STEM



TRASH ISLAND: A GARBAGE PATCH JOURNEY™

Children take on ocean research challenges and apply creative thinking to address the buildup of trash in the North Pacific Central Ocean Gyre.

- ◆ Confidence
- ◆ Design Thinking
- ◆ Innovation



KEY SKILLS AND CONCEPTS

Architecture

Biomimicry

Design Thinking

Ecology

Engineering

Physics

BOLDER BUILDERS™

In Bolder Builders, children join engineer, architect and builder Archie Tek to restore a town called Unlucky. They apply building principles that have been used for centuries, learning that even through natural disasters, people can be resilient and rebuild their communities. Considering both function and aesthetics, children design the town layout and construct buildings and bridges. They collaborate, brainstorm and plan their design, and then create, test and recreate to discover that they can make an impact on the world.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Applying empathy and creative problem solving to design shelters for different weather conditions.



Exploring biomimicry and innovation, using inspiration from nature to create strong structures.



Using STEM principles to replicate bridge construction and learn how earthquakes impact buildings.



Bolder Builders aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

Writing

Chemistry

Art

Design Thinking

Physics

E.Z. SCIENCE™

In E.Z. Science, children conduct experiments, solve puzzles and create games to help the manager of a famous science magazine keep subscribers happy. As they help the magazine publish solutions to everyday problems, children encounter engaging lessons in physics, mathematics, engineering, invention and the arts. Building valuable skills with each hands-on activity, children are introduced to the writing process and the challenges of entrepreneurship as they use their creativity to save the day.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Practicing Innovation and learning about historical timelines.



Building an understanding of entrepreneurship while overcoming obstacles to run a successful business.



Exploring a variety of STEM concepts while sketching and constructing prototypes.



E.Z. Science aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

Life Science

Physical Science

Engineering

Biology

Earth & Space Science

Measurement & Data

PASSAGE TO PLANET ROG™

Passage to Planet ROG engages children in an exciting journey through space to a distant planet. Through a series of challenging missions, from establishing an outpost to making clay sculptures, children practice creativity, collaboration and communication as they develop solutions to explore this new place and then return home to Earth. Children also practice empathy and understanding of differences through observing alien lifeforms. This hands-on adventure empowers children to use their imaginations, make observations, collect data, apply engineering principles and practice responsible decision making.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Building confidence while working individually and in teams to survive on a new planet.



Applying creative problem-solving skills to complete missions and travel back to Earth.



Empowering the use of imagination and creativity to understand differences.



Passage to Planet ROG aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

Measurement

Animal Science

Writing

Ecology

Biology

SOS: ENDANGERED EARTH™

In SOS: Endangered Earth, children team up with the Saving Our Species (SOS) organization and use their ingenuity to fulfill an important mission — protecting animal habitats and preserving natural resources across the country. This mission guides children to practice empathy, explore the relationship between humans and wildlife, investigate the real ecological issues that will affect their futures, and apply responsible decision making and creative problem solving to make a positive impact on the world.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Building confidence by applying unique ideas and talents that can help the environment and shape the future.



Practicing design thinking to invent solutions that balance the needs of animals and humans.



Demonstrating persistence while brainstorming, sketching, testing and modifying prototypes.



SOS: Endangered Earth aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

Biomimicry

Design Thinking

Engineering

Engineering Design

Entrepreneurship

Speaking & Listening

WHEEL OF INVENTION™

In Wheel of Invention, children team up to take on exciting invention challenges. Throughout the module, they have the chance to be inspired by the unique features of animals and plants from around the world as they build prototypes to provide real-world solutions. Along the way, students play games that will test their aim to win bonus materials. To score even more prizes, contestants race to buzz in and correctly answer questions that mention invention. Get ready to spin and win!

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Pitching different invention designs that solve real-world problems.



Using the unique features of plants and animals from around the world to inspire the prototyping process.



Working in teams to develop inventions that are presented to others.



Wheel of Invention aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

English Language Arts

Social Studies

Mathematics

Measurement & Data

Engineering

Visual Arts

CASTLES, CATAPULTS AND COATS OF ARMS™

Children build skills for the future as they explore the past in Castles, Catapults and Coats of Arms. Investigating basic scientific principles through the lens of medieval history, children use their imaginations to take on the roles of lords, ladies, knights, craftspeople and serfs. They work together to complete hands-on challenges and discover that inventiveness has existed even in times of suppressed learning, helping them to build empathy and responsible decision making skills.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Exercising design thinking and creative problem solving to construct a castle wall and sculpt boats to transport cargo.



Applying fundamental knowledge of STEM concepts while exploring history.



Creating, testing and recreating a catapult and drawbridge using simple machines.



Castles, Catapults and Coats of Arms aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

Physical Science

Engineering

Biomimicry

History

Algebraic Thinking

Speaking & Listening

FLIGHT SIGHT™

Flight Sight offers children insight and inspiration from inventors who have made human flight possible, from the first attempts at manned flight through space exploration. Just as people have gained new perspectives by flying farther and soaring higher, children also discover new ways to see the world in this module. Both collaboratively and independently, they engage in kinesthetic activities, explore art concepts and practice real-world problem solving to defy gravity, create topographical maps and travel beyond Earth's atmosphere.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Demonstrating persistence while investigating aspects of flight from the ground up.



Building an appreciation for intellectual property by getting to know National Inventors Hall of Fame Inductees and their innovations.



Applying creative problem solving and exploring biomimicry to simulate space travel.



Flight Sight aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

Physical Science

Engineering

Fluid Dynamics

Aerodynamics

Algebraic Thinking

Energy

PHYS ED: PHYSICS IN MOTION™

In Phys Ed: Physics in Motion, children team up to create imaginative games inspired by famous scientists including Galileo, Newton, Bernoulli and Gilbert. Through fast-paced, creative problem solving, children explore and experiment to discover how and why objects move. They investigate the laws of gravity, energy, friction, motion and magnetism, and they build perseverance and pride as they determine how to incorporate each of these concepts into their dynamic game designs.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:



Developing persistence while experimenting with air pressure to complete an exciting parachute challenge.



Engaging in STEM exploration by creating an innovative golf game based on Newton's laws of motion.



Gaining confidence by investigating magnetic fields and building kinetic sculptures.



Phys Ed: Physics in Motion aligns to [Common Core and Next Generation Science Standards](#).



KEY SKILLS AND CONCEPTS

Oceanography

Animal Science

Mathematics

Environmental Science

Geography

Engineering Design

TRASH ISLAND: A GARBAGE PATCH JOURNEY™

In *Trash Island: A Garbage Patch Journey*, children investigate the extreme buildup of trash in the North Pacific Ocean Gyre between California and Hawaii. They must determine what has contributed to this area, known as Trash Island, and develop solutions to keep it from growing. Children are immersed in ecological topics including ocean conservation and pollution control as they collaborate, conduct research and tap into their creativity to clean up the ocean and secure a brighter, healthier future.

CURRICULUM HIGHLIGHTS

THIS MODULE EMPHASIZES THESE ASPECTS OF THE I CAN INVENT MINDSET:

INNOVATION

Practicing innovation to develop ideas that promote sustainable living and environmental conservation.

DESIGN THINKING

Applying design thinking to build devices that collect trash and remove contaminants through water filtration.

CONFIDENCE

Building confidence while taking on ocean research challenges that connect to real-world issues.



Trash Island: Garbage Patch Journey aligns to [Common Core and Next Generation Science Standards](#).

WHAT'S INCLUDED

EDUCATOR RESOURCES

- Step-by-step instructor guide and curriculum, aligned to national and state standards
- Activity objectives, subject background, academic vocabulary, guiding questions and discussion
- Includes transferrable teaching strategies in inquiry-based learning and 21st Century Skill building
- All-inclusive, hands-on materials for thematic modules
- Posters and handouts for an immersive experience



CREATIVE COLLABORATION

- Start-to-finish program support from dedicated team members at the National Inventors Hall of Fame
- Flexible implementation and scheduling to meet school and district needs
- Promotional materials available to generate participant registration

EXTENSION RESOURCES

- Tech addendum for flexible implementation options
- Literacy and science extensions





PRICING

LICENSED

EACH UNIT SUPPORTS
ONE CLASSROOM OF
UP TO 25 STUDENTS.

CLASSROOM SET PRICE PER UNIT

1-5 UNITS

\$1,000

6-11 UNITS

\$900

12+ UNITS

\$800



PRICING

PARENT PAID

CLASSROOM SET

EDUCATOR STIPEND

UNITS PURCHASED

PRICE PER PARTICIPANT

12-19 PARTICIPANTS

20-25 PARTICIPANTS

\$59

\$200

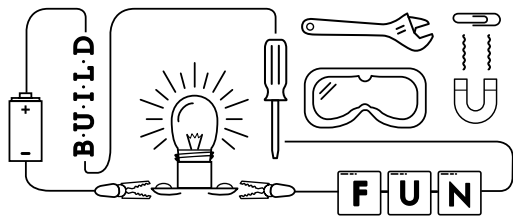
\$250

**EACH UNIT SUPPORTS
ONE CLASSROOM OF
UP TO 25 STUDENTS.**

APPENDIX



Trash Island: A Garbage Patch Journey™



CURRICULUM EXCERPT

View a sample of our curriculum to see how we provide detailed guidance for easy-to-implement program experiences.

PROVEN BENEFITS OF National Inventors Hall of Fame EDUCATION PROGRAMS

More than 25 years ago, the National Inventors Hall of Fame® began formally measuring the impact of its programs. During this time, multiple independent evaluations have confirmed both the short- and long-term benefits of these programs.

	CHALLENGES	OUR EDUCATION PROGRAM SOLUTIONS
INVENTOR MINDSET	Youth need more opportunities to develop an I Can Invent® Mindset.	<ul style="list-style-type: none"> Peer-reviewed research shows that Camp Invention® supports the cultivation of an inventive mindset as children explore their self-perception as inventors and innovators.¹ Exposure to invention and invention during childhood can increase the likelihood that a child will become an innovator.² The Camp Invention program provides this exposure through our Inductee integration.
BENEFIT ASSES OUTCOMES	Girls need equitable opportunities in invention and STEM.	<ul style="list-style-type: none"> While girls are less likely than boys to correlate STEM (science, technology, engineering and mathematics) and their identity as an inventive person, they might approach invention from another perspective, such as design or creativity. These perspectives are central to our education programs, which are designed to promote stronger connections between invention and STEM. Patent holders are successful, earning four times the average American household income. If girls were exposed to female inventors at the same rate as boys are to male inventors, the gender gap in innovation would shrink by half.³ Our Inductees make up a diverse group of inventors who serve as career role models.
GENETIC OPPORTUNITIES	BIPOC youth need equitable opportunities in invention and STEM.	<ul style="list-style-type: none"> Our research on Black youth identity in invention education found that while all learners had positive associations with creating and making, and less positive associations with pitching and presenting, Black youth were far more likely to attribute their discomfort to social anxiety. The National Inventors Hall of Fame evolves its programs based upon research insights that inform best practices in critical areas, such as cultural competency.⁴ After one week of Camp Invention, Black, Indigenous and People of Color (BIPOC) youth were shown to have a stronger correlation between engineering and an inventive mindset. BIPOC learners also were more likely than their white counterparts to strongly self-identify as "inventive" after one week of camp.⁵



¹ J.S. Gomez, E. Maloney, A. Rutledge, and M. Rubin. Invention Education as a Context for Children's Identity Exploration. *Journal of STEM Outreach*, Vol. 4, Issue 1 (Spring 2022)

² A. Bell, B. Chetty, K. Jarrett, N. Pinkston, and J. Van Rossum. Who Becomes an Inventor in America? The Importance of Exposure to Innovation. *Opportunity Insights* (2023).

³ J.S. Gomez and M. Rubin. Invention Education Programming: Perspectives of Children and Teacher-Facilitators. A Technical Report Prepared for Camp Invention. The Center for Educational Performance, Dickinson University (January 2022).

National Inventors Hall of Fame
invent.org | 800.968.4332

PROVEN BENEFITS OF NIHF EDUCATION PROGRAMS

Learn more about the proven benefits of participating in National Inventors Hall of Fame education programs.

BE A PART OF SOMETHING BIG!

We partner with over 2,800 districts and schools in all 50 states, Puerto Rico and D.C. The list below is not inclusive and is always growing.

- | | | |
|---|---|--|
| Juneau School District
Juneau, AK | Indianapolis Public Schools
Indianapolis, IN | Cincinnati Public Schools
Cincinnati, OH |
| Enterprise City Schools
Enterprise, AL | Jefferson County Public Schools
Louisville, KY | Cleveland Metropolitan School District
Cleveland, OH |
| Fayetteville Public Schools
Fayetteville, AR | Plymouth Public Schools
Plymouth, MA | Olentangy Local School District
Delaware, OH |
| Scottsdale Unified School District
Scottsdale, AZ | Baltimore County Public Schools
Towson, MD | Portland Public Schools
Portland, OR |
| Tucson Unified School District
Tucson, AZ | Flint Community School District
Flint, MI | Central Dauphin School District
Harrisburg, PA |
| Los Angeles Unified School District
Los Angeles, CA | Troy School District
Troy, MI | Puerto Rico Department of Education
Barceloneta, PR |
| San Jose Unified School District
San Jose, CA | Rochester Public Schools
Rochester, MN | Charleston County School District
Charleston, SC |
| Union School District
San Jose, CA | Liberty 53 School District
Kansas City, MO | Metropolitan Nashville Public Schools
Nashville, TN |
| Capistrano Unified School District
San Juan Capistrano, CA | Vicksburg Warren School District
Vicksburg, MS | Allen Independent School District
Allen, TX |
| Denver Public Schools
Denver, CO | Missoula County Public Schools
Missoula, MT | Austin Independent School District
Austin, TX |
| Cherry Creek School District No. 5
Greenwood Village, CO | Charlotte-Mecklenburg Schools
Charlotte, NC | Dallas Independent School District
Dallas, TX |
| St. Vrain Valley School District
Longmont, CO | Wake County Public School System
Raleigh, NC | Klein Independent School District
Klein, TX |
| Westport Public Schools
Westport, CT | Bridgewater-Raritan Regional School District
Bridgewater, NJ | Park City School District
Park City, UT |
| Red Clay Consolidated School District
Wilmington, DE | Cranford Public School District
Cranford, NJ | Alexandria City Public Schools
Alexandria, VA |
| Orange County Public Schools
Orlando, FL | Newark Public Schools
Newark, NJ | Loudoun County Public Schools
Ashburn, VA |
| The School District of Palm Beach County
West Palm Beach, FL | Albuquerque Public Schools
Albuquerque, NM | Orange County Public Schools
Orange, VA |
| Hillsborough County Public Schools
Tampa, FL | Clark County School District
Las Vegas, NV | Lake Washington School District
Redmond, WA |
| Gwinnett County Public Schools
Savannah, GA | Saratoga Springs City School District
Saratoga Springs, NY | Seattle Public Schools
Seattle, WA |
| Gary Community School District
Gary, IN | Akron Public Schools
Akron, OH | Middleton-Cross Plains Area School District
Middleton, WI |

INVENT.ORG/CAMP

NATIONAL DISTRICT LIST

View some of our district partners across the country.

BRING TRANSFORMATIVE INVENTION EDUCATION TO YOUR DISTRICT TODAY!

TO LEARN MORE, CONTACT

invent.org | 800-968-4332 | nihfatmyschool@invent.org



National Inventors
Hall of Fame®
EDUCATION PROGRAMS

In partnership with



UNITED STATES
PATENT AND TRADEMARK OFFICE ®

The National Inventors Hall of Fame provides STEM education programs for young innovators from PreK through grade 12.