STEM Summer Camp 2025

Kindergarten – 8th Grade

Camp Invention and Invention Project are nationally recognized K-8 summer enrichment programs that have brought **authentic invention education** to children across the country for more than 30 years. Each year, a brand-new curriculum is developed and tested to deliver **hands-on experiences** that encourage **divergent thinking** and are designed to **spark imaginations** through **open-ended engagement** in **creative problem solving**.

- **Student Hours:** 8:30 - 11:30 am
- **Two K-8 Camp Options:**

Scullen	Granger
July 14 - 17	July 21 - 24

- **Students can attend one week or both weeks.**
- **Registration Cost:** $150 for one week
  $300 for both weeks

Camp Invention K-Grade 5

Invention Project Grades 6-8

NO Transportation Provided

Taught by IPSD 204 teachers

Registration Closes June 1

INNOVATIVE EXPERIENCES

- Real-world challenges lead children to practice empathy and build confidence and persistence while becoming solution seekers
- Authentic STEM experiences foster critical thinking, communication, collaboration and creativity
- High-energy activities and opportunities keep children active and engaged

Questions: Dr. Tara Bell (until May 13) tara_bell@ipsd.org or (630) 375-1141

STEM Projects for Grades K–5
(differentiated by level)

Projects By Date

K–5 Week 1: Scullen Camp
July 14–17 8:30–11:30am
- Penguin Launch
- In Control

K–5 Week 2: Granger Camp
July 21–24 8:30–11:30am
- Workshop Illusion
- Claw Arcade

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.

In collaboration with our National Inventors Hall of Fame Inductees, we have identified nine essential skills and traits that unlock creative potential. Each Camp Invention module highlights different aspects of this mindset, guiding children to unlock their full potential and discover the power of their own creativity.

2025 CAMP INVENTION MODULES

IN CONTROL™
As travelers on the ultimate road trip, children test their **navigation skills** using traditional maps and GPS, inventing their way out of bumps in the road and **discovering** that the journey is just as much fun as the destination.

ILLUSION WORKSHOP™
Immersed in the mesmerizing world of special effects, children discover the science behind **optical illusions**, then invent their own spinning animation device and moving props. Campers create their own Spin-o-scope™ to show the illusion of motion, blending the realms of science and art.

CLAW ARCADE™
Using creativity and **engineering skills**, children experiment with **physics** to construct a functional claw machine as they draw inspiration from nature's claws, talons and pincers, then create awesome prizes to pick up.

PENGUIN LAUNCH™
Embarking on an epic eco-expedition, children investigate penguins and the **geography** of Antarctica, tapping into **design thinking** to construct planet-saving prototypes with the help of a robotic assistant.

Camp Invention®

K–5 Week 1: Scullen Camp Project Details

July 14–17 8:30–11:30am

KEY SKILLS & CONCEPTS

- Environmental Science
- Biology
- Electronics and Robotics
- Magnetism
- Physics

I CAN INVENT MINDSET FOCUS AREAS

STEM

Engaging in hands-on exploration of physics and materials science through STEM.

ENTREPRENEURSHIP

...ding entrepreneurship skills by creating a ...rand and looking at target audience.

INTELLECTUAL PROPERTY

Gaining intellectual property literacy by designing a logo.

MODULE OVERVIEW
PENGUIN LAUNCH

Students embark on an eco-expedition to investigate penguins in their Antarctic habitat, entering penguin colonies with the help of a Snow-ver – a rover equipped with a robotic research penguin that can roll and glide across icy surfaces. Then, they unleash design thinking as they create flippers and launchers to propel their own plush magnetic penguin.

WHAT THEY TAKE HOME:

Plush penguin with magnetic feet and flippers

MEET A HALL OF FAMER
JACQUELINE QUINN

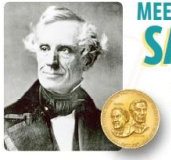
This module was inspired in part by National Inventors Hall of Fame Inductee Jacqueline Quinn, inventor of Emulsified Zero-Valent Iron (EZVI).

MODULE OVERVIEW
IN CONTROL

Students take control of their innovative journey by testing their navigation skills as they study travel maps and discover the use of artificial intelligence (AI) in everyday road trip items like GPS. They assemble their own receiver and custom Control Panel and exercise their communication skills as they make exploration decisions.

WHAT THEY TAKE HOME:

Custom cardboard Control Panel with radio transmitter and receiver, "AI Assistant" dashboard bobblehead



MEET A HALL OF FAMER
SAMUEL MORSE

This module was inspired in part by National Inventors Hall of Fame Inductee Samuel Morse, who invented Morse code.

KEY SKILLS & CONCEPTS

- Electrical Engineering
- Artificial Intelligence
- Circuitry
- Navigation
- Physics

I CAN INVENT MINDSET FOCUS AREAS

STEM

Exploring STEM concepts by assembling a transmitter and receiver.

CREATIVE PROBLEM SOLVING

Practicing creative problem-solving and decision-making skills while receiving challenges at each stop along the way.

PERSISTENCE

Staying persistent while inventing solutions to unexpected road trip detours.

Camp Invention®

K–5 Week 2: Granger Camp Project Details

July 21–24 8:30–11:30am

KEY SKILLS & CONCEPTS

- Neuroscience
- Biopsychology
- Electrical Engineering
- Optics
- Physics

I CAN INVENT MINDSET FOCUS AREAS

STEM

Discovering STEM concepts through exploring the phenomena of illusions.

PERSISTENCE

Practicing persistence while building and wiring a Spin-o-scope.

INNOVATION

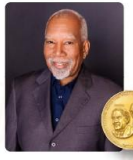
Discovering innovations of National Inventors Hall of Fame Inductees through hands-on activities.

MODULE OVERVIEW
ILLUSION WORKSHOP

Students are introduced to captivating optical illusions, discovering the mechanics of how the mind and eye perceive surroundings. Then, they blend science and art to create their own spinning animation device and moving props, becoming special effects experts and designing new entertainment experiences of the future.

WHAT THEY TAKE HOME:

Custom built Spin-o-scope™, personalized pneumatic prop



MEET A HALL OF FAMER
LANNY SMOOT

This module was inspired in part by National Inventors Hall of Fame Inductee and Walt Disney Imagineer Lanny Smoot, inventor of Theatrical Technologies and Special Effects.

MODULE OVERVIEW
CLAW ARCADE

Students use hands-on physics and engineering concepts to make a DIY claw machine inspired by the claws of the natural world, from lobster claws to eagle talons to crab pincers. Once they build their clawsome cardboard machine, they create one-of-a-kind prizes and explore entrepreneurship principles as they hook investors on their arcade experiences.

WHAT THEY TAKE HOME:

Custom cardboard DIY claw machine, mini NIHFty Bot™ plush keychain, pompom creature, light-up spiky ball

MEET A HALL OF FAMER
PATRICIA BATH

This module was inspired in part by National Inventors Hall of Fame Inductee Patricia Bath, inventor of Laserphaco Cataract Surgery.

KEY SKILLS & CONCEPTS

- Materials Science
- Biology
- Design Engineering
- Mechanics
- Physics

I CAN INVENT MINDSET FOCUS AREAS

ENTREPRENEURSHIP

Developing entrepreneurship skills by creating a pitch to hook investors.

INTELLECTUAL PROPERTY

Discovering intellectual property skills by creating a logo and designing a billboard.

STEM

Discovering STEM concepts like physics and mechanics by design engineering a claw machine.

Invention Project®

STEM Projects for Grades 6–8

(differentiated by level)

Projects By Date

Grades 6–8 Week 1: Scullen Camp

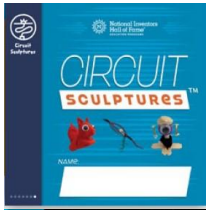
July 14–17 8:30–11:30am

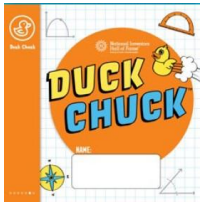
- Circuit Sculptures
- Rescue Squad

Grades 6–8 Week 2: Granger Camp

July 21–24 8:30–11:30am

- Duck Chuck
- Automotive Design 101





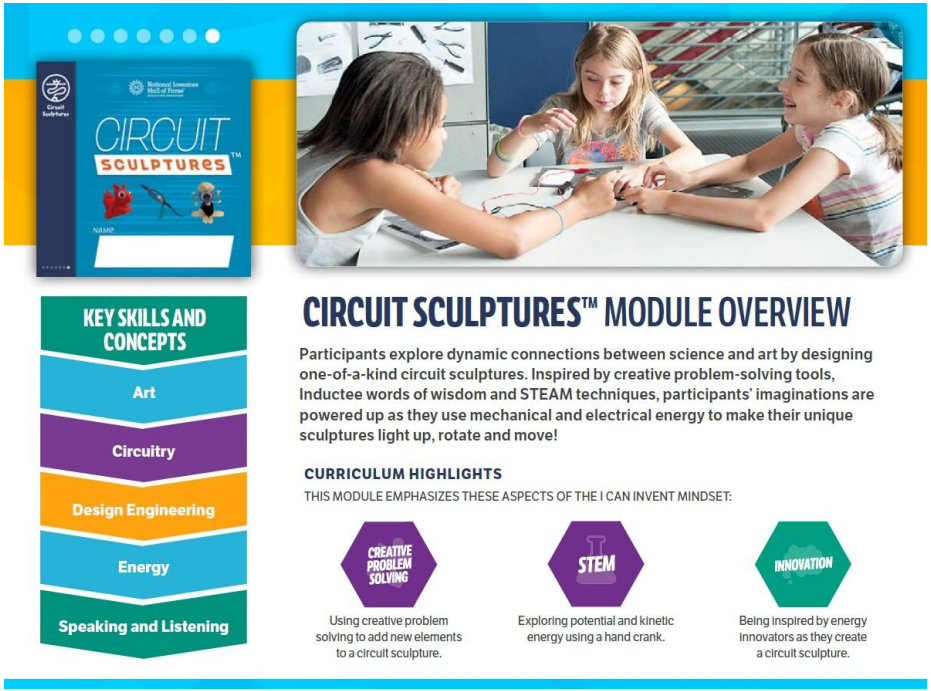
I CAN INVENT MINDSET

Like all National Inventors Hall of Fame® education programs, Invention Project is designed to lead students to build the I Can Invent® Mindset — a growth mindset encompassing essential skills and traits demonstrated by innovators including our Inductees. This mindset is instilled through hands-on exploration and strengthened through application.

Invention Project®

Grades 6–8 Week 1: Scullen Camp Project Details

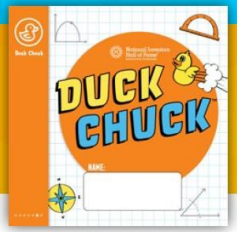
July 14–17 8:30–11:30am



Invention Project®

Grades 6–8 Week 2: Granger Camp Project Details

July 21–24 8:30–11:30am



KEY SKILLS AND CONCEPTS

- Entrepreneurship
- Marketing
- Angles and Measurement
- Trajectory and Velocity

DUCK CHUCK™ MODULE OVERVIEW

In this global adventure, children design, build and test a device to launch rubber ducks. First, they collect and budget "quack coins" to buy materials for creating their device. Following step-by-step instructions, they build a launcher. Then they launch their ducks around the world in an exciting effort to visit famous landmarks while putting the physics concepts of trajectory and velocity to the test.

CURRICULUM HIGHLIGHTS

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

STEM
Exploring STEM concepts like velocity and trajectory to design launching devices.

ENTREPRENEURSHIP
Building entrepreneurship skills by trademarking and marketing inventions.

CREATIVE PROBLEM SOLVING
Determining how to modify inventions through hands-on, creative problem solving.

KEY SKILLS AND CONCEPTS

- Presentation Skills
- Art
- Sketching and Sculpting Invention Prototypes
- Design Thinking
- Engineering Design

NIHF'S AUTOMOTIVE DESIGN 101™ MODULE OVERVIEW

Participants become immersed in automotive design as they create a futuristic vehicle. Along with exploring principles of sketching, sculpting and color mixing, participants are encouraged to think about their vehicle's users while prototyping innovative interiors and safety features.

CURRICULUM HIGHLIGHTS

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

INNOVATION
Innovating a car of the future using clay and other materials.

DESIGN THINKING
Designing and modifying a vehicle prototype that takes the needs of their audience into account.

CONFIDENCE
Building confidence while developing a futuristic car prototype.

STEM Camp 2025 Registration Instructions

Registration is NOW OPEN through Monday, June 2, 2025

Kindergarten through Eighth-grade students are invited to participate in one OR two weeks of STEM Camp. This fun, hands-on STEM experience will provide students with activities from two different modules from either Camp Invention or Invention Project depending upon students' grade. Just as before, our STEM Camp will be taught by Indian Prairie certified teachers.

If families would like to sign up for both weeks, they must register using EACH link below.

2025 STEM Summer Camp - Week 1 at Scullen - July 14-17
Tag: 2025summerstemweek1
Link: https://store.ipsd.org/#!/products/P523WUXUFF

2025 STEM Summer Camp - Week 2 at Granger - July 21-24
Tag: 2025summerstemweek2
Link: https://store.ipsd.org/#!/products/XNAUSOJ2KU

Questions: Dr. Tara Bell (until May 13) tara_bell@ipsd.org or (630) 375-1141