INVENTIONLAND®
EDUCATION

Professional Learning for K12 Educators

Professional Learning

Confident teachers foster confidence in students. Our professional learning programs are designed to give teachers the tools they need to empower both students and themselves.

From single and multi-day intensive professional learning courses to half-day workshops, teachers can earn state teacher continuing education credits, and even become trainers for their district and state Educational Services Agency.

Let us show you how our professional learning courses can help teachers become inspirational leaders for a new generation of inventors and innovators!

From your classroom, you can help innovate the future.

Our Professional Learning programs are engaging and extremely hands-on. We'll work with you to maximize your maker spaces, embrace new technologies, and become much more proficient in STEM and project-based learning. We'll share strategies on how to confidently introduce and integrate this into your classroom.

Providing knowledge to ensure your success in the classroom

3-day Maker Technology Training

This immersive, 3-day training program provides educators the skills they need to confidently instruct students on the use of maker machines.

- This course goes well beyond the instructional manual, with hands-on strategies on how to use various maker machines in classroom settings.
- Teachers learn the ins and outs of machines and how to safely instruct and guide students through practical use and applications.
- The program includes overviews of your current machines, and what they're used for, with plenty of time for actual use of the machines by teachers.
- Each day covers a different maker machine depending on what your school currently has.
- We also include time for actual projects that educators can use with students, experiencing first-hand what to expect.

The result is that teachers gain much greater confidence and knowledge, to easily guide students in their use of maker machines. This training is designed for educators in STEM, vocational and maker space settings. It is also customized for the specific machines that you have at your location.

It truly maximizes the investment your school or district has made in purchasing the equipment and brings to focus the practical applications in the real-world.

"At the first of the week, a few of us thought we knew everything we needed to know and the others were nervous to even touch the machines. By the end of the training, those who thought we had the answer learned new skills and tricks to make what we were already doing easier and faster. The rest of the group became excited and no longer nervous, and they were jumping in and asking questions. By the end, I believe we now have the proper knowledge to adequately train the students we have now and in the future."

Michael Ritchie
Cleveland High School,Attended the 3 Day Maker Technology Training

Day of STEM Innovation

Our immersive Day of STEM Innovation helps educators learn practical ways of introducing interesting and engaging projects to supercharge their classrooms. You can choose the approximate age and class ranges for hands-on activities that demonstrate STEM applications in a fun and exciting ways.

Whether you're solely focused on STEM concepts, or would like to introduce project-based learning into the classroom, our team of trainers will take you through the entire process. Educators will go through our hands-on activities to see first-hand how their students will experience the projects. These activities offer a different spin on key concepts to allow students to be active and engaged in their learning while having fun.

The activities and challenges are great for team building and deepening learning concepts in a very practical way. We've found that lectures and memorization tactics found in most classrooms don't engage students universally. Some students may be able to learn this way, but many others are much more visual and physical learners that might not always be able to reach their full potential without shifting the learning approach.

These activities allow students to learn by doing, giving them the opportunity to learn concepts in ways that are more suited to all students. They create a unique and imaginative environment where anything is possible. We use a variety of techniques and materials that make learning fun and applicable.

We offer fun, hands-on experiences to inspire creativity, teamwork and a growth mindset in teachers.

> "This workshop was probably the best I've been to in years. It was hands-on, engaging, and I left with multiple resources that I can and will actually use in my classroom."

Bethany Bostic
Rappahannock County Elementary School

> "The training was hands-on and engaging. It let us see firsthand what the kids will experience. I can't wait to see all of the ideas that our students come up with."

Ben Barrett
Technology Education,
Valley Grove School District

Topical Workshops

These engaging workshops will help you learn and guide your students in the use of advanced making equipment that makes learning easier!

Our workshops go beyond the content of your machine's instructions manual. We teach practical application of how to use maker technology in the classroom.

Your teachers will be able to more confidently and effectively lead your students in maker technologies.

1. 3D Printing

This workshop covers effective use of your 3D printer, including common pitfalls to avoid. The full-day session allows for plenty of practice.

2. Vinyl Cutting

These relatively inexpensive machines are widely used. We describe the most popular options and great ways to teach with them, with practical projects.

3. Laser Cutting

Learn proper setup and operation of this powerful cutting and engraving tool. We also offer suggestions on how to get the most out of it.

4. Plasma Cutting

This insightful workshop will demonstrate the correct way to use the plasma cutter for optimal classroom instruction, and includes safety tips.

5. Electronics Kits

We introduce and explain electronic kits that offer fascinating ways to introduce beginners to the world of electronics, based on that you have.

6. Raspberry Pi and Arduino

These are the two most widely used basic electronics systems. Raspberry Pi is a mini-computer, whereas Arduino is a microcontroller. We'll walk you through when and how to use both.

7. Stop-motion Animation

With a smartphone or tablet and an app, students learn how to bring still objects to life through the magic of animation. This module explains how with no previous animation knowledge required!

8. Prototyping with Cardboard

This is one of our most popular workshops since cardboard is easily to work with, inexpensive and excellent for STEM learning. We'll share techniques and projects.

9. Video Production

Video production is much more than just taking a video on a smartphone. We'll show you the steps and programs to make beautiful videos.

10. Logo and Package Design

This is a great way to bring STEAM alive in the classroom. Learn how to better teach these concepts from industry professionals.

11. Prototyping with Blue Foam

Blue foam is an excellent way to sculpt, and create 3-dimensional projects. We're show you how to do it in the classroom.

12. Working with Silicone

Silicone is a synthetic rubber that is commonly used to create molds of existing objects. During the training, we will teach you how to create your own molds, cast your own copies of small items, and how to use it in the classroom.

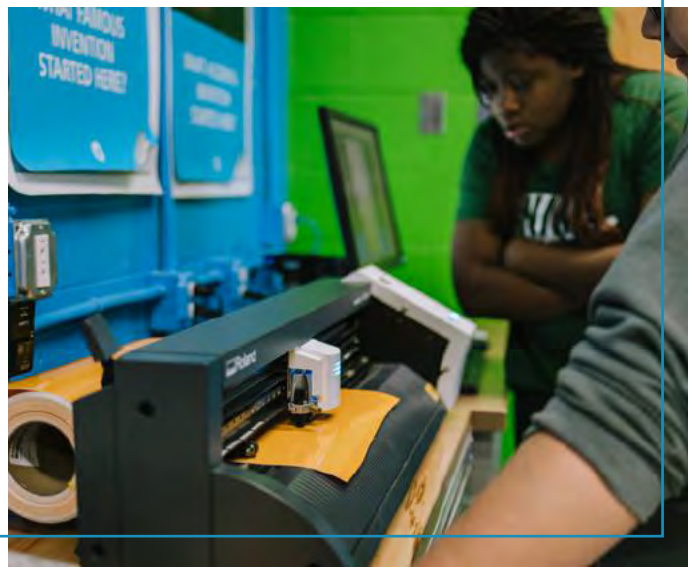
Topical Workshops

To help teachers gain hands-on experience and classroom confidence

1. 3D Printing

3D printers are everywhere—in schools, homes, and industry. This workshop will help you better understand the practical applications of 3D printing in the classroom. We'll cover how to use the machine, including tips and tricks. The full-day session gives teachers plenty of time to use the machines with one of our experienced trainers.

- Go beyond the owner's manual to learn how to effectively teach 3D printing.
- Learn how to bring in STEM and maker technology into the classroom.
- We work with your current 3D printers, no matter the make.
- Experience projects the way your students will.
- Safety, supervision and software tips included.
- Full day sessions include plenty of practice time.



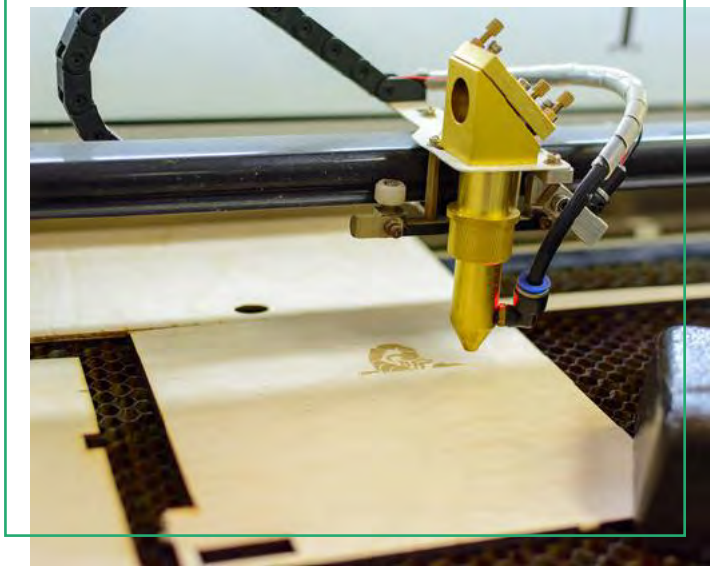
2. Vinyl Cutting, Printing and Heat Press

These relatively inexpensive machines are used everywhere, including schools. We share professional techniques to help you get the most out of them. This full day workshop provides guided instruction with plenty of time for practical use of the machines under the guidance of one of our experienced trainers.

- We'll explore the myriad of applications for making custom projects and products with vinyl.
- Learn to use essential techniques of design software to get the most from your vinyl printer/cutter.
- You'll have access to practical in-class lessons.
- Promoting student safety is a core component.
- We apply our industry-based knowledge to your school.
- The workshop is based on the exact equipment you own.

3. Laser Cutting

Laser cutters are one of the most useful pieces of maker equipment available and can be found in many schools, shops, and maker spaces. In this workshop, you'll gain an understanding of the different ways you can use a laser, and the materials upon which you can use it. You'll also cover what kinds of work can be done with a laser as well as tips on how to set up a laser to operate safely and avoid wasting materials.



- Learn how to safely and effectively use laser cutting in your maker space.
- See best-practices to teach students how to maximize laser cutter usage.
- **Full-day sessions include time for participants to use the machine themselves in the afternoon.**
- Workshops are based on your specific models.
- We'll guide you using your exact laser cutter.

4. Plasma Cutting

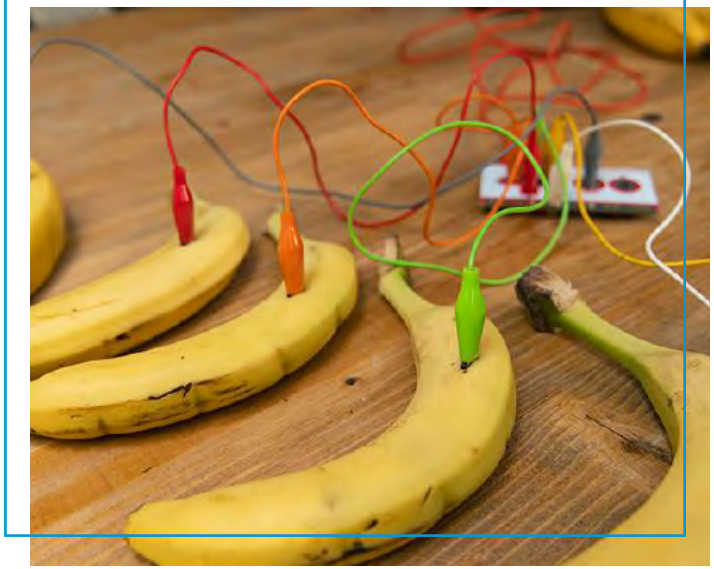
Plasma cutting machines are used for a variety of metal fabrication projects. They are commonly used for construction and manufacturing. Designers and artists use plasma cutting in both signage and sculpture, as well as to create decorative panels for various interior projects.

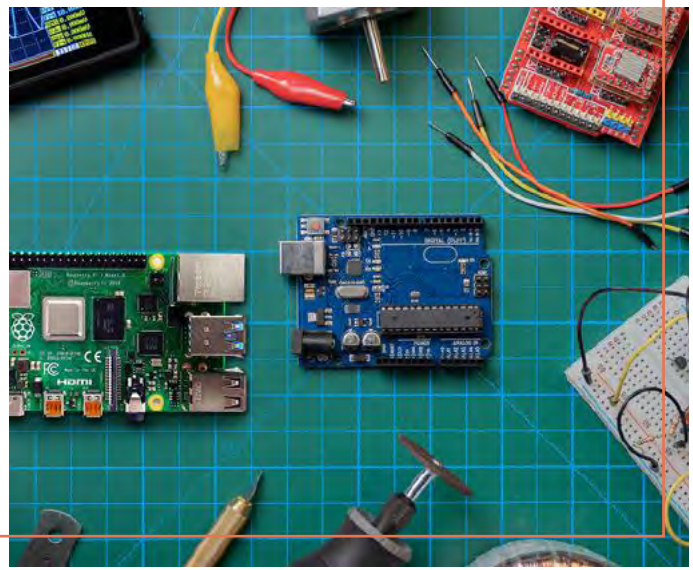
- We'll demonstrate practical ways to safely introduce plasma cutters to students.
- We include several different age-appropriate projects for students in your maker space.
- **Full-day sessions include time for teachers to use the plasma cutting machine in the afternoon, with one of our trainers.**
- Workshops are based entirely on your specific models.
- We'll suggest projects to use with your students.

5. Electronics Kits

There are many kits available to teachers that demonstrate the different concepts of electronics, but what's the best way to teach your students? In this workshop, we'll go over your exact kit and provide you with tips, tricks, and projects to make the most impact with your students in the classroom environment.

- We work with your exact kit – just let us know which one(s) you have.
- Our trainers have years of real-world experience in electronics as working professionals.
- This is a high-impact workshop that brings electronics to life.
- Learn effective strategies for classroom safety.
- See the latest electronic breakthroughs.
- We'll also suggest age-appropriate projects.





6. Raspberry Pi and Arduino

Adding electronics to a project used to require knowledge and skill that were beyond most people. But now single-board computers like the Raspberry Pi and microcontrollers like the Arduino have made the process easy and affordable. In this training, we'll compare both and explain what they are and what they do.

- Learn the differences and best practices.
- Learn the best applications for both of these devices.
- Discover new ways to introduce and teach single-board computers.
- Engage and empower your students with the various things you can do with Raspberry Pi and Arduino.

7. Stop Motion Animation

Inventionland Education will provide entry-level skills and techniques for stop-motion animated film making in which objects are physically manipulated in small increments to exhibit motion or change. This hands-on workshop includes the following topics and skillsets:

- What exactly is stop motion?
- Elements of stop motion including objects, clay, puppets, cut-outs & silhouette animation.
- How to use stop motion apps and with devices.
- Best ways to shoot stop motion and edit stop motion.
- Best practices on how to assemble and produce an actual stop motion movie.
- Estimated timelines for stop motion projects.

8. Prototyping with Cardboard

As making grows as a core component of classroom learning, the material demands on educators also grow. One solution is building with cardboard. In this training, you will learn from industry professionals why cardboard is our first choice for model building. You'll also learn how to use the properties of cardboard to your advantage.

- Learn about different types of cardboard and what they are good for.
- See demonstrations of cardboard cutting tools and recommendations for the classroom.
- Learn different gluing options and techniques that you never knew you didn't know!
- Try professional tips and techniques for shaping and folding.
- Build your own cardboard models using these tricks of the trade.

9. Video Production

Video production is going mainstream, with the ability to deliver persuasive and compelling content that can be shared in a variety of settings. And, with today's technology, it's easier than ever to produce videos in a very short period of time. We'll show you how to do it effectively.

- How to ideate, script and storyboard ideas for best results.
- See how green screen technology makes videos come to life.
- Develop key competencies with video editing tools.
- How to make your videos come to life with:
  - Voiceovers
  - On-screen text (supers)
  - Music, intros and animation
- Leave the workshop with the skills you need to create stunning videos in your classroom.

10. Logo/Package Design

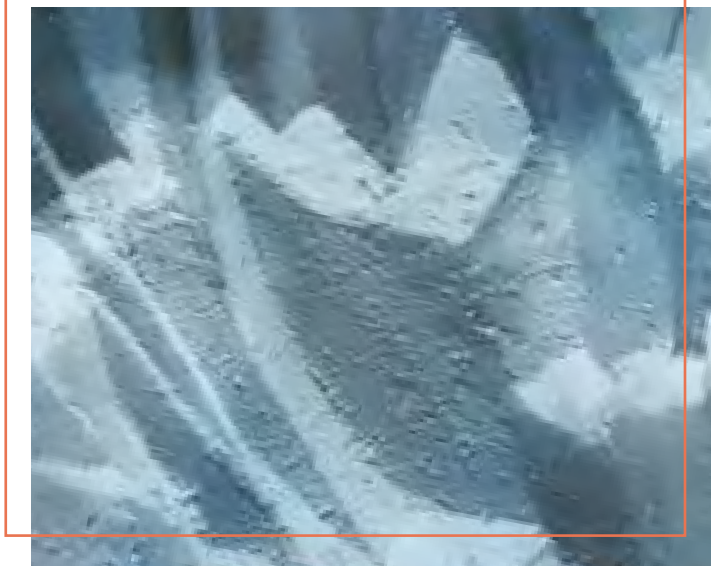
Logos and packaging design are critical components in bringing new ideas and products to market. This workshop provides the key concepts of logo development and packaging design. Learn and apply how Inventionland has brought hundreds of consumer products to stores across America.

- Concepts of colors and fonts in logo design.
- Useful programs to create stunning graphics.
- Explore packaging techniques that are structurally sound.
- See the impact and various techniques to use for:
  - Standing out in a crowded marketplace
  - Marketing techniques for the web
  - Positioning products for success
- This workshop strongly reinforces STEAM concepts.

11. Prototyping With Blue Foam

We cover the basics of how to use blue foam to build prototypes, displays or dioramas! Ever wonder how movie sets are made? It's the same way we created Inventionland. This material can be carved into any shape in a variety of sizes for prototyping, and is epic for project-based learning.

- Bring project-based learning to life in a big way.
- If a picture is worth a thousand words, blue foam is even better because it's 3-dimensional.
- We'll show you how to safely introduce blue foam into the classroom.
- This is perfect for classroom contests and show and tell.
- You bring the blue foam, we'll bring the expertise.



12. Working with Silicone

Learn how to mold, create and clone parts using silicon. Carving forms and using them to create silicon molds can be great fun. Learn how to cast pieces effectively so your end product will be a hit with your students. Join us for this workshop, where you'll learn a multitude of new skills to use with your students.

- Learn what silicone is and how to use it safely.
- Learn the steps to create a mold of a small object.
- Get suggested age appropriate projects for use in the classroom.
- Get beginners tips to make molding fast, easy and fun!

Custom Training

for your unique needs

in STEM and Maker Space technology

> This training is amazing. It takes what you do, or don't, know and enhances your skills. The trainer was so easy to work with because he implemented his knowledge of the equipment and programs, and he "dumbed" them down so that I could understand the language of the equipment."

Anne Person
Cleveland High school

Custom Training

The Professional Learning team at Inventionland Education can create a custom training program for your school or district. This means that you can select the topics, maker machines, and dates.

From half-day to multi-day sessions, we can combine various workshops into one cohesive custom training event.

We'll start with a discussion with your team prior to crafting the ideal training sessions. We'll find out what your goals are, the areas you would like to cover, and match that with our hands-on training.

Let us show you how our custom training can help teachers become inspirational leaders in maker space and STEM activities.

Inspire the Next Generation of Student Creators and Innovators

Our Professional Learning custom training programs are designed to maximize maker spaces, embrace new technologies, and allow your teachers to become much more proficient and confident in delivering STEM and project- based learning to their students. Let us design the perfect custom training program for you and your students.

Pricing

SKU	Course/Workshop	Page	In-person	Virtual	Days	Cost
IPD-01	3-day Maker Technology Training	4	●		3	$6,000 *
IPD-02	Day of STEM Innovation	5	●	●	1	$2,000 **
IPD-03	3D Printing	8	●		1/2 or 1	$1,200 1/2 day | $2,000 full day in-person*
IPD-04	Vinyl Cutting	8	●		1/2 or 1	$1,200 1/2 day | $2,000 full day in-person*
IPD-05	Laser Cutting	9	●		1/2 or 1	$1,200 1/2 day | $2,000 full day in-person*
IPD-06	Plasma Cutting	9	●		1/2 or 1	$2,000 full day in-person*
IPD-07	Electronic Kits ***	10	●	●	1/2 or 1	$1,200 1/2 day | $2,000 full day in-person*
IPD-08	Rasberry PI and Arduino	10	●	●	1/2 or 1	2-hour $750 | $1,200 1/2 day | $2,000 full day in-person*
IPD-09	Stop-motion Animation	11	●	●	1/2 or 1	2-hour $750 | $1,200 1/2 day | $2,000 full day in-person*
IPD-10	Prototying with Cardboard **	11	●	●	1/2 or 1	2-hour $750 | $1,200 1/2 day | $2,000 full day in-person*
IPD-11	Video Production ***	12	●	●	1/2 or 1	$1,200 1/2 day | $2,000 full day in-person*
IPD-12	Logo and Package Design	12	●	●	1/2 or 1	$1,200 1/2 day | $2,000 full day in-person*
IPD-13	Prototying with Blue Foam ***	13	●		1/2 or 1	$2,000 full day in-person*
IPD-14	Working with Silicon ***	13	●		1/2 or 1	$2,000 full day in-person*
IPD-15	Custom Workshops	14	●	●	1, 2 or 3	$2,500 1 day | $4,500 2 day | $6,000 3 day *

Notes 10-30 teacher participants per session depending on course

* For in-person training, nominal travel expenses are additional

** You may request training at our Pittsburgh, PA HQ

*** Requires School provides materials

A fun, hands-on approach to inspire creativity, teamwork and a growth mindset in both in-class and remote learning environments.

We also offer:

Innovation Curriculum

Challenging, Flexible STEAM Courseware

Inventionland Education is powered by our more than 30- year history of creating innovative solutions for industry and helping corporations turn ideas into actual products.

Our student-directed curriculum follows Inventionland's real-world proven 9-Step Method that takes student projects from Idea to concept model to the business pitch.

Teachers can easily use the curriculum in an in-class or remote environment and they don't need to have previous innovation experience. All that's needed is an inquiring mind, observational skills, and a desire to help students prepare for the jobs of the future.

Our courses are designed for cross-disciplinary, interactive learning to inspire and build confidence in students from diverse backgrounds and abilities. They reinforce STEM learning and are highly flexible to meet various grades, schedules, and delivery models.

> "It was awesome to see kids doing things they wouldn't normally be doing like marketing and research… It was fantastic to see them step out of their element into a real life situation, and just see them be so successful. You could see their confidence and what they think they could do go to astounding levels. It was really amazing."
>
> Eric Stoudnour, Teacher,
> Altoona Area School District

Students often see problems in need of better solutions. The challenge for them is learning how to navigate from observation of the problem to configuring a solution that works and communicates to others. This skill is widely sought after in today's working world.

We also offer:

Immersive Innovation Labs®

Spaces that Inspire Creativity

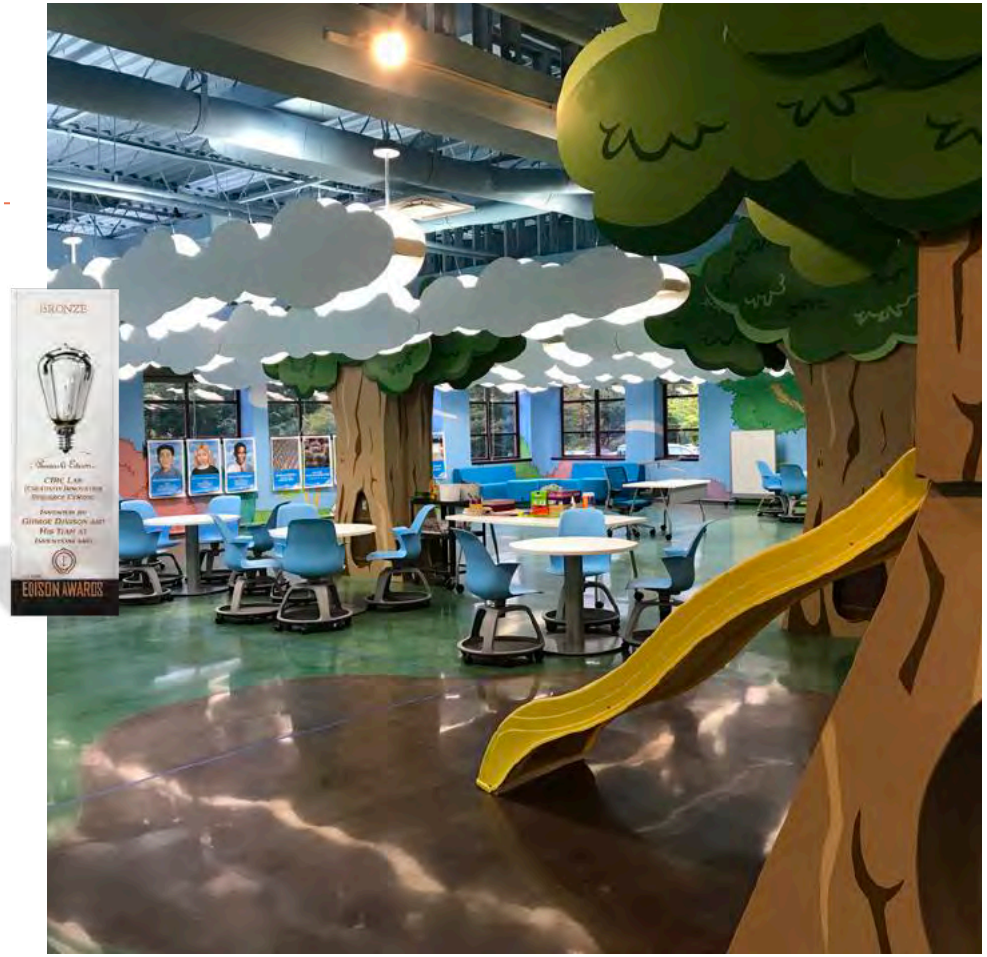
Our Innovation Labs® Design Services team at Inventionland Education works with you to reimagine and bring to life imaginative and stimulating spaces. We always strive to design the most original learning environments to help promote creativity within the classroom. It's all about collaboration. It's perfect for immersive learning.

With a full line of Innovation Labs, the Innovation Labs Design Services team will create mood boards, themes, features and custom sketches for the space based on findings during the Discovery Process. The proposals will also Include furniture and equipment suggestions along with 3D renderings of what the final Innovation Lab would look like.

Our first Innovation Lab was awarded the prestigious Edison Design Award and was the first-ever educational space considered in the competition. Our Innovation Labs have since gone on to win many other top-level awards. We believe that creating an environment that brings technology, innovation, and inspiration together allows student engagement and imagination to soar.

Construction and Installation Services

Inventionland Education will be there every step of the way to ensure that your plan comes to life. We work directly with your team, design architects and construction professionals and help oversee the project from beginning to the end. We will also work with them to build all our custom features.



Plans Based on your Needs and Budget

Working in complete partnership with district and school staff, our Innovation Labs® Design Services team can help you reinvent your space and ensure your needs are met every step of the way. We provide the resources and expertise to convert any existing space into an immersive environment.

> **"It's hard to be creative when you work in a beige box all day long."**
>
> John Stoddard, Superintendent, Berkshire Local Schools

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