TinkRworks®

PROGRAM GUIDE

The #1 STEAM Education Program

STEAM Project-Based Learning that Inspires Tomorrow's Leaders!

TinkRworks is a hands-on STEAM curriculum for PreK–12 classrooms designed to equip students with the skills, knowledge, and capabilities needed to succeed in the 21st century workplace. Developed by teachers and engineers, TinkRworks utilizes the design process and Project-Based Learning to engage students in unprecedented ways. Our STEAM curriculum also supports core instruction and is aligned to state science, math, language arts, and computer science standards.

What Differentiates TinkRworks?

STEAM, not STEM

At TinkRworks, we proudly advocate for “A” in STEAM. Studies show how the arts positively impact student achievement when integrated into a STEM practice. STEAM helps students make critical connections and learn design principles and standards. These provide a valuable framework for solving problems and inspire curiosity, inquiry, and innovation.

Advance Equity & Accessibility

At TinkRworks, we believe that every student has the capacity to achieve STEAM greatness. Through Project-Based Learning and differentiated instruction, our curriculum ensures that all students have access to participate in the productive development of STEAM skills and knowledge.

Cultivate Social & Emotional Learning

Laser-focused, skills-rich projects teach essential STEAM concepts while also developing SEL competencies like kindness, self-expression, and resilience. By highlighting SEL alongside academic achievement, TinkRworks helps students develop essential interpersonal skills.

STEAM Instruction Made Simple

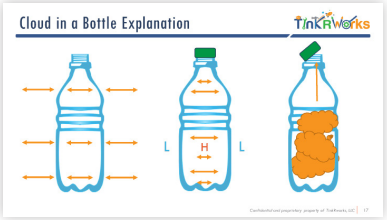
TinkRworks supports teachers at every step — no extra preparation required. An online Portal equips teachers with all the tools they need to ensure a successful implementation.

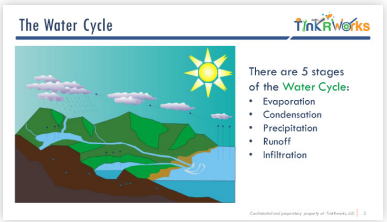
Manage Classes and Facilitate Instruction

Teachers can find all the tools they need to complement essential standards, support project construction, administer assessments, and organize classes.

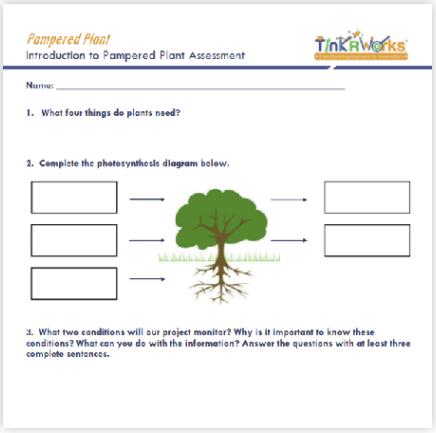
Lesson Plans & Standards Alignment: Detailed lesson plans and standards alignment documents provide a comprehensive overview for each lesson—including learning objectives, key concepts, vocabulary, pacing suggestions, and how content is aligned to grade-specific standards

Instructional Slides: Content-rich slides are used to help structure lessons with background information and to lead classroom discussion.

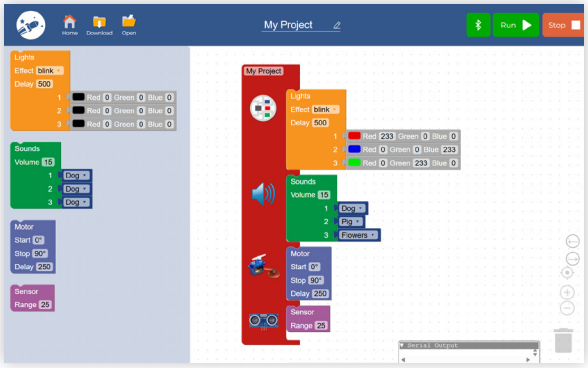




Assessments: Formal and informal assessments offer a combination of multiple choice, written response, and true/false questions.



User-friendly Coding Environment



TinkRcode, our programming environment, grows with your students. Starting with Beginner Block Programming for PreK–2, advancing to Block Programming for Grades 3–8, and culminating in Python for Grades 9–12. This progression helps students build confidence as they move from drag-and-drop to text-based coding. Each student's custom code animates lights, speakers, motors, and more, making every project uniquely their own.

Ongoing Professional Development

You don't need to be a STEAM expert, Project-Based Learning whiz, or have experience with coding to teach TinkRworks. We provide customized PD to ensure effective implementation. If you run into any technical or curricular questions during implementation, we're here to help! Partnering with TinkRworks means you can expect responsive and personalized assistance from our support team.

STEAM Implementation Made Simple

Ready-to-teach projects that include everything you need to deliver comprehensive, grade-appropriate STEAM instruction.

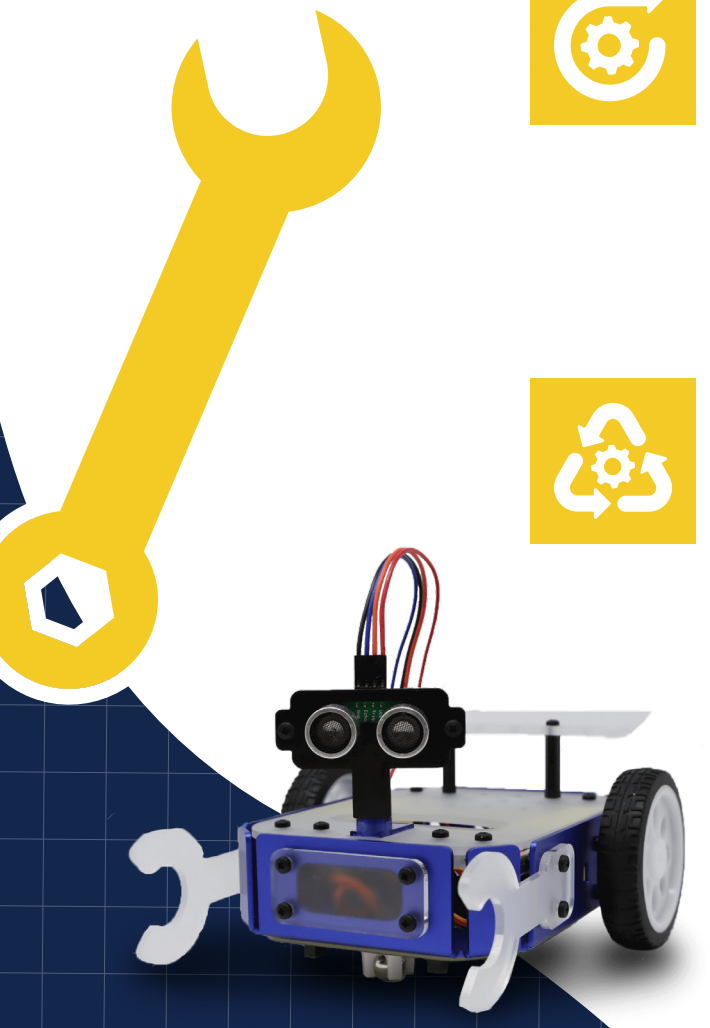
Two Types of Project Kits:

Make-and-Take Kits

Many TinkRworks' projects are consumable — meaning students receive their very own project kit that they can customize and take home to keep. This means the learning adventure doesn't end in the classroom. Students can continue to engage with STEAM and bring their ideas to life long after the curriculum is complete.

Reusable Kits

Select projects are designed with reusability in mind. Reusable projects can be implemented with students, disassembled, and used again with another group of students throughout the day or school year — creating endless opportunities to reinforce key concepts.



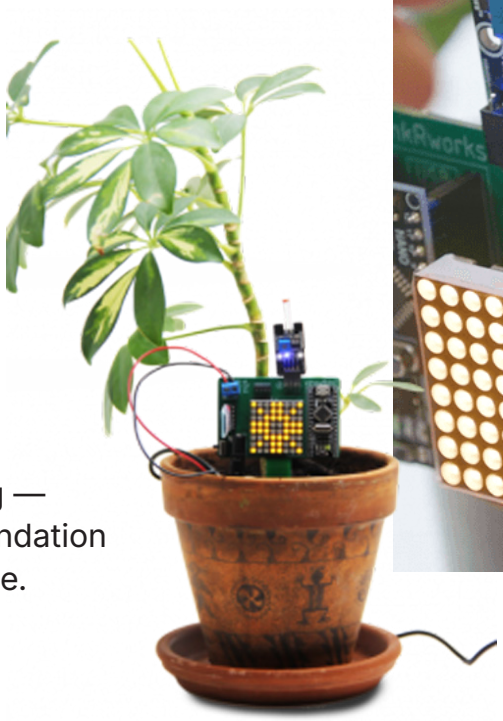
Flexible Implementation

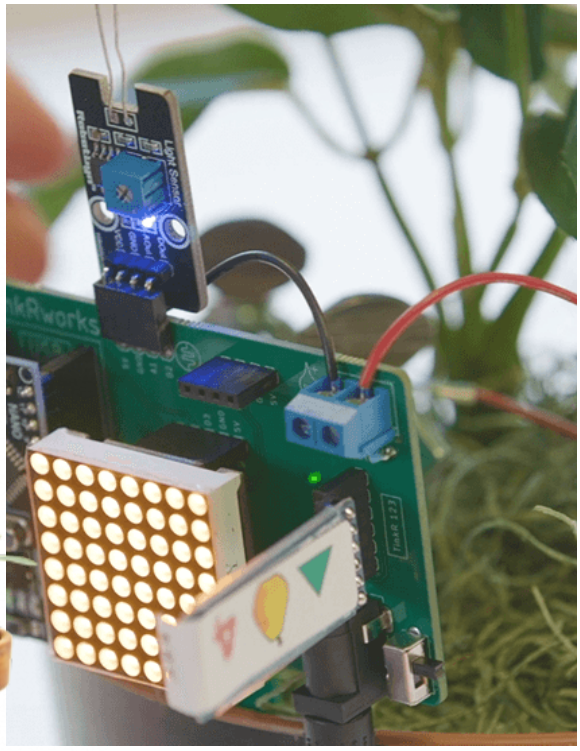
Personalize your instructional time with TinkRworks. Each project provides 10-18+ hours of instruction and can be used in science class, STEAM lab, after school, and summer school.

APPROACH	MODEL	SCHEDULE
Targeted	Supplemental Science Class STEAM Club Extended Day	Once or twice weekly for 45–60 minutes up to 15 weeks
STEAM Everyday	STEAM Lab Summer School Extended Day	Everyday for 45–60 minutes over a 5–6 week period

Now You Have a Makerspace

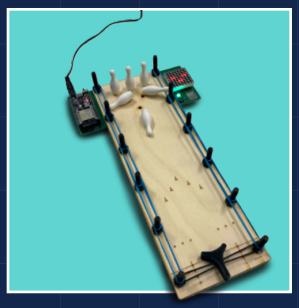
A makerspace, large or small, unlocks the potential of STEAM in PreK–12 schools. From a STEAM Lab to a corner in a science classroom, makerspaces elevate learning and blur the lines between learning and making. Here, students are not just passive learners; they're creators, innovators, and architects of their own knowledge. TinkRworks helps schools embrace the spirit of making — giving students a strong foundation for college and the workforce.





Award-Winning Lineup of STEAM Projects

Visit TinkRworks.com to learn more about each project, explore standards, and download samplers.

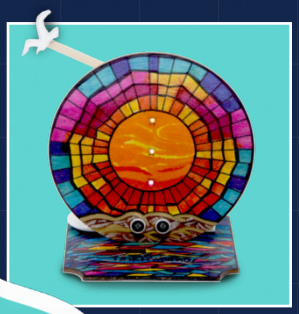


Pushes, Pulls & Pins
Grades PreK–2

Strike up the fun with Project-Based Learning! Students design a custom tabletop bowling game, exploring forces, motion, and collisions, while using programming to personalize lights and sounds.

Smart Lamp
Grades PreK–2

Illuminate learning with inspiring hands-on STEAM! Students build and personalize a color-changing Smart Lamp that plays music, exploring light, sound, and programming while connecting emotions with creative expression.



Art Electric
Grades PreK–8

Ignite imagination with programmable art! Students bring interactive masterpieces to life using coding, design, electronics, and motors, blending technology and creativity while developing essential STEAM skills.

Pampered Plant

Grades 2–5

Cultivate curiosity through plant science and art! Students design a dynamic plant monitoring system, programming a light display that reacts to soil and light changes, while honing creativity, coding, and problem-solving skills.

Tech-A-Sketch

Grades 3–5

Paint a bright future with STEAM! Students build and design a personalized digital canvas. Through coding custom brushes and crafting interactive artwork, students explore coordinate systems, displays, and shape plotting.

TinkRbot Scout

Grades 3–5

Spark innovation with the ultimate robotics STEAM experience! Students build, code, and personalize custom robots, developing grade-appropriate skills in problem-solving, programming, and engineering while tackling real-world challenges and unlocking endless possibilities in the world of robotics.

LaunchPad

Grades 3–8

Unlock a world of STEAM in the palm of your hand! Students code games, light shows, and more with an electronic circuit board fully equipped with touch sensors, lights, sounds, and accelerometers. Explore coding fundamentals while bringing ideas to life through hands-on problem-solving and creativity.

TinkRdrone

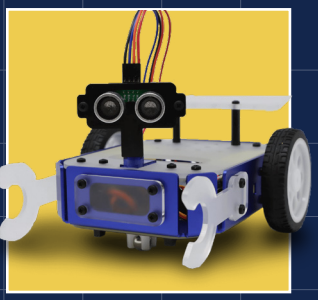
Grades 6–8

Take hands-on learning to new heights! Students design, build, and fly their own quadcopters while exploring lift, thrust, and electronic systems. Hands-on experimentation fosters engineering skills, data visualization, and computational thinking in an exciting, real-world learning experience.

TinkRsynth

Grades 6–8

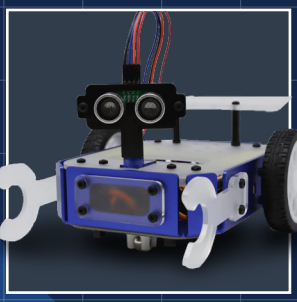
Make some noise with STEAM! Students design and program a sound mixing board, exploring coding, sound waves, and music composition. This hands-on project builds STEAM skills while sparking creativity and collaboration—turning the classroom into a high-tech jam session!



TinkRbot AI

Grades 6–8

Engage your classrooms in an exciting hands-on robotics experience! This project combines robot construction, coding, and AI exploration as learners create customizable robots that sense and respond to their environment. Now featuring a dedicated AI lesson!



TinkRbot AI: Python

Grades 9–12

Inspire innovation with AI and Python! Students build and program a fully functional robot while learning Python coding fundamentals like loops, conditionals, and functions. They'll also explore artificial intelligence by training their own AI model and discovering how machines learn.

Learn more about the technology requirements at **TinkRworks.com/FAQs**

Curriculum-Rich Projects for Grades PreK–12

PROJECTS	BEGINNER BLOCK PROGRAMMING				BLOCK PROGRAMMING						PYTHON PROGRAMMING			
	PreK	K	1	2	3	4	5	6	7	8	9	10	11	12
 Pushes, Pulls & Pins	✓	✓	✓	✓										
 Smart Lamp	✓	✓	✓	✓										
 Art Electric	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				
 Pampered Plant				✓	✓	✓	✓							
 Tech-A-Sketch					✓	✓	✓							
 LaunchPad					✓	✓	✓	✓	✓	✓				
 TinkRbot Scout					✓	✓	✓							
 TinkRdrone								✓	✓	✓				
 TinkRsynth								✓	✓	✓				
 TinkRbot AI								✓	✓	✓				
 TinkRbot AI: Python											✓	✓	✓	✓

REUSABLE KITS

TARGET GRADE LEVELS

From an administrator's point of view, the biggest success is that teachers enjoy using TinkRworks in their classrooms. They see their students engaged in something rigorous and relevant and that leads to a classroom that is well-managed. Students want to participate. You can't say that about a lot of programs.

Aaron Esper, Ph.D.
Director of North Central CTE Cooperative

Even our special education students benefit from TinkRworks. There's little that makes us happier than seeing equity and access at work with every student accessing the curriculum—and flying their own drones in the middle school hallway!

Rebecca Laratta, Ed.D.
Assistant Superintendent for Curriculum, Instruction, and Student Services at Gower School District 62

I incorporated the TinkRworks Art Electric project in my classroom. My fourth graders were engaged and excited throughout the project. They enjoyed learning the different components of the project and being able to design it how they wanted to. It allowed them to be creative and express themselves while learning how to code. The projects have all the resources and tools you need to implement the project lessons with your class. I'm excited to try other projects from TinkRworks.

Courtney McNabb
STEM Teacher at Manchester Academic Charter School in Pittsburgh

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