



COOL KID IP CHALLENGE OVERVIEW OBJECTIVE

To have students work through all steps in within the Engineering Design Process taking a concept from idea to a product or business.

CHALLENGE GENERAL DESCRIPTION

Getting kids to connect to and see value in their ideas is a key ingredient in teaching STEM, and one of the biggest challenges. This is why CreositySpace created the *Book of Ideas*. Similar to a real inventor’s notebook, the *Book of Ideas* was designed to encourage kids to write down or draw their own ideas and inventions. The *Cool Kid IP Challenge* is the next step in familiarizing kids with the engineering design process and taking a concept from idea to a product or business.

Every business starts with an idea, but to be successful you need more than just a good idea. You must also identify the target market (your customers), consider how you might manufacture (make) or sell your product (and the cost to do so), and how you will protect what makes your solution unique or special (your intellectual property). In this activity, students will work in groups of 3–5 to work through the steps in the engineering design and product development process—from solution brainstorming and market and production considerations, to intellectual property protection.

The *Cool Kid IP Challenge* blends key elements of a business plan competition and Invention Convention—taking the holistic approach from idea conception to commercialization. Designed to be delivered over the course of 10-12 weeks, the six core lesson topics highlighting the Engineering Design Process actively incorporate key elements of the Common Core and Next Generation Science Standards, culminating in a Live Pitch event.

COMMON CORE STANDARDS ADDRESSED

The Cool Kid IP Challenge is aligned with several Next Generation Science Standards (NGSS) and common core ELA & Math standards.

In general, the challenge supports the following common core applications:

- Collecting, Analyzing (ideas, features)
- Research (product design, competition, intellectual property)
- Designing and Investigating (product features)
- Oral Fluency (presentation)
- Persuasive Writing (market)
- Drawing/Sketching (creating advertisement/pamphlet)

CHALLENGE OVERVIEW

Challenge weeks 2—10 require two 40-minute classrooms sessions each week. Weeks 1 and 11 require some out-of-class time. If you would like to add a prototyping component, then you should plan to add 5 – 10 additional sessions to build and revise the prototype. The challenge as outlined is most appropriate for students in grades 3 – 8.

Challenge Week	Associated Challenge Step	Covered Content
1	Teacher Information Sessions	Challenge lesson, materials and support overview (1 hour, out of class time)
2	1 – Introduction and Challenge Selection	Challenge introduction with class. (Review vocab, go over the challenge, set teams, etc.)
3	2 – Brainstorming	Post spring break challenge refresher. Brainstorming product ideas.
4/5	3 – Design & Manufacturing	Select the product and think about how it could be made.
6	4 – Market Assessment	Determine product customers and how you will advertise to them.
7	5 – Intellectual Property	Think about how to protect your idea and product.
8/9	6 – Presentation Planning and Practice	Write out the pitch presentation, make slides, and practice.
10	7 – In-class Presentations	Give the in-class presentations. (The presentations should be 2 – 3 minutes in length but it is good to allocate ~5 minutes per presentation).
11	Live Pitch	Multi-school Live Pitch event – top two teams from each classroom (evening event, transportation provided if required)

WHAT TEACHERS AND ADMINISTRATORS ARE SAYING ABOUT THE COOL KID IP CHALLENGE PILOT IN ALBANY, NY.

“Our current grade 3 students sent me a letter after their most recent CreositySpace program and they wrote “I hope that we’ll get this opportunity next year in 4th grade” and “This is the best opportunity for us.”” – Jennifer Gonyea, STEM Coordinator Bethlehem Central School District, Bethlehem, NY

“...the program was a great opportunity for kids and the schools involved.” - James Darby, Principal, Castleton Elementary School, NY

“It was a wonderful experience!” - Shelley Flood, Grade 3 Teacher, Sheridan Prep Academy, Albany NY

“CreositySpace has enhanced my instruction and forever changed my approach to my students and my craft. This has allowed my students to engage in meaningful learning across the content area with STEM at the center, making it easy and seamless for me to integrate and connect their learning to the real world.

The engagement of parents through this experience has been amazing. They students have been so enthusiastic to this approach to teaching and learning, that the parents became much more involved and aware of what their children are learning and of what they were capable.” – Tricia Paradis, Grade 3 Teacher, Slingerlands Elementary School, Bethlehem NY



BACKGROUND

[CreositySpace LLC](#) is connecting kids to STEM through entrepreneurship. Based in Delmar, New York, and Seattle, Washington, CreositySpace collaborates with STEM entrepreneurs to help kids tap into their natural creativity and curiosity at a time when they ask, “What do I want to do when I grow up?” Our in-school program, *Book of Ideas*, and hands-on activities keep STEM current, real and relatable to young minds, while our Educator Guides and accompanying videos, entrepreneur database, and young entrepreneur book series, *Grit*, are designed to help educators integrate STEM into ELA, science, social studies and math.

CreositySpace has worked with over 6,000 students and educators in 20 schools nationally since 2013. Initial survey results from boys and girls across grades 3 and 4 in schools where CreositySpace conducted activities are encouraging and statistically significant in their findings that students’ comfort level and perceived understanding of technical concepts and the underlying scientific principles *nearly tripled* — *from 25 percent to 69 percent* — after participation in the CreositySpace program. Additionally, girls who have participated in our program express a 2x increase in interest in STEM-oriented careers.

Entrepreneurs and innovators are uniquely positioned to inspire young students in STEM. They are on the front lines of innovation launching technology startups, conducting forward-looking research, and creating new products to solve complex industrial and social challenges. Leveraging the ingenuity and tenacity of STEM entrepreneurs is key to making STEM current, real and relatable for students of all ages. Equally important is connecting kids to their own ideas and seeing value in those ideas—enter the CreositySpace *Book of Ideas* and the *Cool Kid IP Challenge*.

The *Book of Ideas*—which mimics an inventor’s journal—and the *Cool Kid IP Challenge* are aimed at helping kids tap into their natural creativity and curiosity at a time when they ask, “What do I want to do when I grow up?” The *Cool Kid IP Challenge* was created in response to requests from teachers, to have a discreet program around the *Book of Ideas*. Doing this allows educators to easily integrate STEM ideas and examples into non-science classes (e.g., art, ELA and social studies), while addressing required education standards and giving students a purpose to write.