







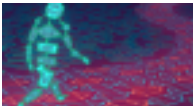







High School Challenges

Challenge Image	Challenge Title	Challenge Description	Mathematics	Challenge Champion
	<u>Reduce, Reuse, Repurpose</u>	Your challenge is to create a product for a customer using existing waste items in a different way from their original purpose. Primary justice focus: Environmental	Composite 3D Figures; Cross Sections; Volume	<u>Brandi Harleaux</u> CEO of SouthPost Oak Recycling Center
	<u>Negate Noise</u>	Your challenge is to invent a product that harnesses noise cancelling technology to reduce noise pollution and make the world more accessible. Primary justice focus: Social	Trigonometric Functions and Graphs	<u>Dr. Antony Joseph</u> Audiologist at Illinois State University
	<u>Routes Reimagined</u>	Your challenge is to design a navigation app that allows users to plan routes based on criteria they value and predict their estimated travel time and distance. Multiple justice focuses: Social, Environmental, or Spatial	Linear Functions; (possibly) Piecewise Functions	<u>Alison DeGraff Olivierre</u> Cartographer for National Geographic
	<u>Gaming for Change</u>	Your challenge is to design a video game that helps improve people's well-being by leveraging projectile motion while connecting with others or practicing healthy habits. Primary Justice Focus: Social	Quadratic Functions and Graphs	<u>Fawzi Mesmar</u> Video Game Designer
	<u>Goal Tracker</u>	Your challenge is to design a business that helps users change unwanted behaviors or develop new healthy habits through tracking and visualizing their progress.	Functions	<u>Sofia Pyrgioti</u> Content Developer at CarbonCloud
Coming Soon	<u>Backed by Data</u>	Your challenge is to design a business that publishes stories, news, or content that use statistical investigations to retell overlooked or misunderstood stories.	Statistical Analysis	**Coming Soon**
	Challenge 7	TBD		
	Challenge 8	TBD		
	Challenge 9	TBD		

Disclaimer: High School Challenges and Teacher Guides are still under development

Middle School Challenges

Challenge Image	Challenge Title	Challenge Description	Mathematics	Challenge Champion
	<u>Operation Lifeline</u>	During natural disasters, delivering essential supplies like water, food, and medicine becomes a race against time. This challenge becomes even harder when the supplies have to be kept cold the whole time so that they don't spoil. In this Design & Pitch Challenge, you will find a workable solution for this important problem.	3-D Figures; Surface Area; Volume	<u>Kris Ludwig</u> Scientist at the United States Geological Survey
	<u>Power Me Up</u>	Gas-powered vehicles release harmful greenhouse gases and rely on a natural resource that will someday be gone. As a result, more and more people are buying electric vehicles. More electric vehicles means there is a need for more electric vehicle charging stations. This is an opportunity for savvy entrepreneurs. In this Design & Pitch Challenge, you will design a company that builds charging stations for electric vehicles.	Ratios; Analyzing Data; Equations	<u>Kristin Vicari</u> Senior Chemical Engineer at Tesla
	<u>Keep It Real</u>	Smartphones are everywhere. They make so many things easier. We can get a ride, order a pizza, and connect with people across the world with a single tap of the screen. But what happens when smartphones get in the way of communication? In this Design & Pitch Challenge, you will design a way to help people put down their phones and connect, face-to-face.	Collecting, Analyzing, and Representing Data	<u>Cardell Patillo</u> Executive Director of the Head Start Program
	<u>Building Algorithms</u>	In today's internet world, data on people's opinions are highly prized. One way to understand those opinions is to ask people to complete surveys. Researchers then create formulas, or algorithms, that analyze their survey responses in an automated process. Many successful businesses are built around algorithms. Your challenge is to build an algorithm that uses people's opinions to rate or rank something you care about and that can be the start of a successful business.	Expressions and Equations	<u>Cathy Yee</u> CEO & Founder of Inclusive
	<u>Prototype to Profit</u>	Being an entrepreneur is about finding problems and turning them into opportunities. It's about inventing new solutions that create value for customers and using those solutions to make money, because even the best ideas need funding to succeed. At the heart of making money is finding the right business model type. The right business model type can be the difference between success and failure for an idea. And, sometimes, the business model type itself is the solution.	Building Linear Functions; Solving Linear Equations	<u>Tyler Maloney</u> Materials Science Engineer & Entrepreneur
	<u>Erase Food Waste</u>	The way food looks is one indicator of whether it is safe to eat. But in the United States, we take this idea too far. Most grocery stores and restaurants won't offer produce to their customers that isn't perfectly shaped and colored, even if it is perfectly safe to eat. This results in a lot	Percentages; Data Collection and Analysis	<u>Oscar Ekponimo</u> Founder & CEO of Chowberry

		of food waste. In this Design & Pitch Challenge, you will design a food-related business that uses a sliding price scale to reduce food waste.		
	<u>Fix It:</u> <u>Design for</u> <u>Community</u> <u>Impact</u>	In every community, there are problems that need solving or things that need improving. The most effective solutions are ones that meet the needs and desires of the community. If you pay attention and ask questions, you will notice what people want and what they're lacking. Entrepreneurs don't wait on the sidelines for others to do the work. They jump in and use their energy and passion to make change happen. What can you fix in your community?	3-D Figures; Surface Area; Volume	<u>Gitanjali Rao</u> Inventor & STEM Promoter
	<u>Flashy</u> <u>Fashion</u>	Technology can now be integrated into clothes, bags, and wearable devices for both self-expression and health & safety applications. Designers' creativity is shining in fashion shows, and tools like LEDs are now accessible enough that anyone can learn to make wearable technology. How will your design light up the world?	Coordinate Plane; Transformations	<u>Kelsy Dominick</u> Designer & CEO of DiDomenico Design
	<u>Pollution</u> <u>Solution</u>	Plastic is a big environmental problem. The world is becoming overwhelmed by plastic waste, especially plastic containers that hold consumer products. Can you imagine a solution to replace plastics that does not cause as much harm to the environment?	3-D Figures; Surface Area; Volume	<u>Clifford Okoth</u> <u>Owino</u> Founder & CEO of Chemolex