Design & Pitch Challenges in STEM

Challenge Title	Challenge Description	Mathematics	Challenge Champion	Challenge Champion	Teacher Guide
Backed by Data	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	**Alex Velez** Data Storyteller at Storytelling with Data		Backed by Data Teacher Guide
Building 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	**Cathy Yee** CEO & Founder of Incluvie		Building Algorithms Teacher Guide
Erase Food Waste	Your challenge is to design a food-related business that uses a sliding price scale to reduce food waste.	Percentages; Data Collection and Analysis	**Oscar Ekponimo** Founder & CEO of Chowberry		Erase Food Waste Teacher Guide
Fix It: Design for Community Impact	Your challenge is to design a physical product that will help solve a problem facing your community.	3-D Figures; Surface Area; Volume	**Gitanjali Rao** Inventor & STEM Promoter		Fix It Teacher Guide
Flashy Fashion	Your challenge is to design a wearable technology product that uses an LED lighting system.	Coordinate Plane; Transformations	**Kelsy Dominick** Designer & CEO of DiDomenico Design		Flashy Fashion Teacher Guide
Gaming for Change	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.	Quadratic Functions and Graphs	**Fawzi Mesmar** Video Game Designer		Gaming for Change Teacher Guide

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Goal Tracker	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	**Sofia Pyrgioti** Content Developer at CarbonCloud		Goal Tracker Teacher Guide
Image Identifier	Your challenge is to design a business that uses machine learning for image identification.	Conditional Probability	**Jason Holmberg** CEO of Wild Me		Image Identifier Teacher Guide
Keep It Real	Your challenge is to design a way to help people put down their phones and connect, face-to-face.	Collecting, Analyzing, and Representing Data	**Dr. Cardell Patillo** Executive Director of the Head Start Program		Keep It Real Teacher Guide
Navigating Networks	Your challenge is to design an organization that uses weighted networks to responsibly and equitably provide goods or services to your customers.	Graph Theory	**Danielle Johnson** Gaming Commissioner for Texas Scholastic Esports Federation		Navigating Networks Teacher Guide
Negate Noise	Your challenge is to invent a product that harnesses noise cancelling technology to reduce noise pollution and make the world more accessible.	Trigonometric Functions and Graphs	**Dr. Antony Joseph** Audiologist at Illinois State University		Negate Noise Teacher Guide
Operation Lifeline	Your challenge is to design a medical pack that can be used to deliver refrigerated medications in times of natural disasters.	3-D Figures; Surface Area; Volume	**Kris Ludwig** Scientist at the United States Geological Survey		Operation Lifeline Teacher Guide

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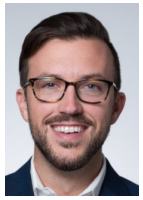
Pollution Solution	Your challenge is to propose a business around producing and selling a liquid consumer product that is packaged in a dissolvable or edible plastic container.	3-D Figures; Surface Area; Volume	**Clifford Okoth Owino** Founder & CEO of Chemolex		Pollution Solution Teacher Guide
Power Me Up	Your challenge is to design a company that makes it easier for customers to charge their electric vehicles.	Ratios; Analyzing Data; Equations	**Kristin Vicari** Senior Chemical Engineer at Tesla		Power Me Up Teacher Guide
Prototype to Profit	Your challenge is to build a plan and pitch that will convince investors to fund your business for your chosen product.	Building Linear Functions; Solving Linear Equations	**Tyler Maloney** Materials Science Engineer & Entrepreneur		Prototype to Profit Teacher Guide
Reduce, Reuse, Repurpose	Your challenge is to create a product for a customer using existing waste items in a different way from their original purpose.	Composite 3D Figures; Cross Sections; Volume	**Brandi Harleaux** CEO of SouthPost Oak Recycling Center		Reduce, Reuse, Repurpose Teacher Guide
Routes Reimagined	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.	Linear Functions; (possibly) Piecewise Functions	**Alison DeGraff Olivierre** Cartographer for National Geographic		Routes Reimagined Teacher Guide
Transformative Structures	Your challenge is to design a physical structure that addresses a community need and can be transformed to support multiple purposes.	Geometric Transformations	**Dr. Andre Mazzoleni** Aerospace Engineering Professor at NC State University		Transformative Structures Teacher Guide