

Strand	Level	Division(s)	Competition	Objective	Engineering Lab Book	Sponsors	Subject/Discipline
Mathematics	6-8	6-8	Math Escape Challenge - Online	Solve math questions through Brain Chase	Not required	Pacific / Cal State LA	mathematics
Mathematics	9-12	9-12	Math Escape Challenge - Online	Solve math questions through Brain Chase	Not required	Pacific / Cal State LA	mathematics
Mathematics	6-8	Novice and Experienced	Coding Solutions - Online	Debug challenge and technical test using CodeHS (JavaScript) / incorporate math	Not required	UCSB / UCR	computer science and mathematics
Mathematics	9-12	Novice and Experienced	Coding Solutions - Online	Debug challenge and technical test using CodeHS (Python programming) / incorporate math	Not required	UCSB / UCR	computer science and mathematics
Engineering	6-8	6 and 7/8	Moon Base	Design and build lightweight structure using recycled cardboard to withstand highest amount of impact (Impact-to-Mass Ratio)	Required	CSU East Bay / SJSU	civil engineering
Engineering	9-12	9/10 and 11/12	Moon Base	Design and build lightweight structure using recycled cardboard to withstand highest amount of impact (Impact-to-Mass Ratio)	Required	CSU East Bay / SJSU	civil engineering
Engineering	6-8	6 and 7/8	Cargo Glider	Design and build glider over an obstacle with a payload for distance	Required	IV	aerospace engineering
Engineering	9-12	9/10 and 11/12	Cargo Glider	Design and build glider over an obstacle with a payload for accuracy	Required	IV	aerospace engineering
Engineering	6-8	6 and 7/8	MESA Machine: Wind-Powered Vehicle	Design and build complex machine - wind powered vehicle for distance	Required	USC	mechanical and electrical engineering
Engineering	9-12	9/10 and 11/12	MESA Machine: Wind-Powered Vehicle	Design and build complex machine - wind powered vehicle for accuracy	Required	USC	mechanical and electrical engineering
Engineering	6-8	6-8	NEDC	Designing for Equity in Your Community		Statewide / San Diego	
Engineering	9-12	9-12	NEDC	Designing for Equity in Your Community		Statewide / San Diego	
Science	6-8	6 and 7/8	Think Tank - Environmental Sustainability	Presentation and design concept with environmental solutions theme / zero emissions	Not required	UCI / Global Institute for Futures Teaching	environmental science
Science	9-12	9/10 and 11/12	Think Tank - Environmental Sustainability	Presentation and design concept with environmental solutions theme / zero emissions	Not required	UCI / Global Institute for Futures Teaching	environmental science
Science	6-8	6 and 7/8	Crime Scene Science (PILOT)	solve crime scene using punnett square and plant cells with sketch of microscope	science journal (in the rules)	UCSF	life science
Science	9-12	9/10 and 11/12	Crime Scene Science (PILOT)	solve crime scene through DNA and fingerprinting with building a DNA model	science journal (in the rules)	UCSF	biology
Achievement			Engineering Lab Book	Revised lab book for required competitions; future to incorporate systems engineering		UCR	

Timeline:

September 1 Posted on Statewide website - DRAFT version rules

November 1 Posted on Statewide website - FINAL version rules