

Strand	Online / In-person	Level	Division(s)	Competition	Objective	Engineering Lab Book	Sponsors	Subject/Discipline
Mathematics		6-8	6-8	Math Escape Challenge	Solve math questions through Brain Chase	Not required	Pacific / Cal State LA / Ukiah Field Station	mathematics
Mathematics		9-12	9-12	Math Escape Challenge	Solve math questions through Brain Chase	Not required	Pacific / Cal State LA / Ukiah Field Station	mathematics
Mathematics		6-8	Learner and Experienced	Coding Solutions	Debug challenge and technical test using CodeHS (JavaScript) / incorporating math	Not required	UC Davis	computer science and mathematics
Mathematics		9-12	Learner and Experienced	Coding Solutions	Debug challenge and technical test using CodeHS (Python programming) / incorporating math	Not required	UC Davis	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	CSULB / UCLA	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	CSULB / UCLA	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 distance	Required	IV	aerospace engineering
Engineering		6-8	6 and 7/8	MESA Machine: Ball Throw/Launch	Design and build complex machine to throw/launch bean bags	Required	USC	mechanical and electrical engineering
Engineering		9-12	9/10 and 11/12	MESA Machine: Ball Throw/Launch	Design and build complex machine to throw/launch balls	Required	USC	mechanical and electrical engineering
Engineering		6-8	6-8	NEDC	Designing for Equity in Your Community			
Engineering		9-12	9-12	NEDC	Designing for Equity in Your Community			
Science		6-8	6 and 7/8	Prepared Speech - Sustainable Environment	Prepared group presentation on sustainable environment	Not required	UCI / Global Institute for Futures Teaching	environmental science
Science		9-12	9/10 and 11/12	Impromptu Speech - Sustainable Environment	Impromptu group presentation on sustainable environment	Not required	UCI / Global Institute for Futures Teaching	environmental science
Science		6-8	6 and 7/8	Crime Scene Science	solve crime scene using punnett square and plant cells with sketch of microscope	science journal (in the rules)	USC / UCSF	life science
Science		9-12	9/10 and 11/12	Bio Breakthrough (Pilot Competition)	CRISPR Quiz Bowl, Transcription, and Cas9 model presentation	science journal (in the rules)	USC / UCSF	biology
Achievement				Engineering Lab Book	Lab book for required competitions		UCR	

**Timeline:**

**September 3** Posted on Statewide website - DRAFT version rules

**November 1** Posted on Statewide website - FINAL version rules