



The Egg-cellent Mars Lander Challenge (Successful or Splat-tacular?)

PROGRAM DESCRIPTION

NASA's Orion and Copernicus spacecrafts are ready for their mission to Mars. All that remains is for the next generation of engineers to design a vehicle that will deliver an astronaut safely to the red planet's surface. Take up the challenge of building a lander out of everyday materials that will protect an egg from a two-story drop while also managing schedules, deadlines, budgets, team dynamics, unforeseen events, and more.

Visit STEMpunkED.com/Programs for more details

LOGISTICS, FEE & DELIVERY REQUIREMENTS

Duration: 7.5 hours or 5 Days x 1.50 hours per day | **Age Range:** 9-10 basic, 11-Adult advanced | **Participants:** 10-30 | **Cost:** See Website | **Requirements:** Video Projector with HDMI port and speakers ; 3 large tables with chairs for assembly stations ; tables and chairs for groups of 3-4 ; 1.0 hour setup and breakdown times ; additional travel charges may apply.

CORE TOPICS & GOALS

- ▲ Define engineering problems, hypothesize solutions, build designs to test hypotheses, and revise and refine designs based on evidence from test results
- ▲ Integrate multi-disciplinary ideas and invent 'outside the box' engineering solutions
- ▲ Balance performance and cost factors by allocating a project's limited financial resources to address design requirements and performance expectations using available materials



CORE TOPICS & GOALS

- ▲ Demonstrate a range of strategies, research techniques, and persistence when engaging with detailed procedural texts or examining complex issues
- ▲ Listen to others' ideas, and engage in scientific dialogues that are based on evidence, not opinion
- ▲ Collaborate effectively as group members who actively listen, respectfully pose thoughtful questions, acknowledge the ideas of others, and contribute ideas