

# STEM Challenge



The STEM Challenge mission provides an opportunity for teams of 3-4 high school students to solve an engineering technical problem; launch an egg payload through a hula hoop to land safely on a target. Students use the engineering design process, including research and the exploration of projectile motion concepts.

Student teams work at their school site to complete hands-on challenges that guide them through the design, construction, test, and modification processes for their launch and payload protection devices. Teachers act as coaches to provide technical and programmatic guidance to their teams throughout the process.

The NM STEM Academy team uses the online Canvas learning management system to provide instructions and define challenges for student teams to complete. Teams submit work online to show they completed each challenge to earn points toward qualifying for the culminating STEM Challenge Symposium event.



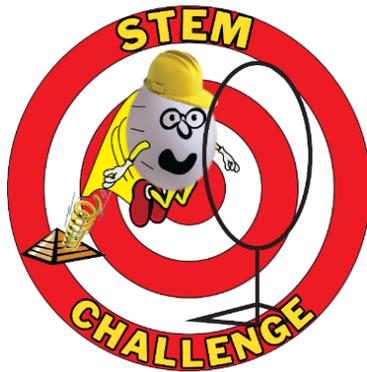
High achieving teams, identified by completed challenges and points earned, are invited to attend the Symposium event at Kirtland AFB in the spring. During the Symposium, student teams demonstrate their launching and payload protection devices and complete on-site challenges.

The STEM Challenge is a fantastic opportunity to actively involve your students in an innovative application of science, technology, engineering, and math (STEM) concepts, develop problem solving skills, and learn how to work as a productive member of a team.

The NM STEM Academy provides modifiable catapult kits (self-created devices allowed), on-line curriculum, and ongoing support for teachers (coaches) and students during the school year.

## **You provide the students, the enthusiasm, and the expertise, and make the following commitments:**

- ◆ Complete and submit the [Coach Registration Form](#).
- ◆ Attend a STEM Challenge Coach Orientation.
  - Ensure that your school submits an EPA School Participation Form.
  - Complete and submit Teams per Coach and Student Demographics Forms.
  - Distribute, collect, and submit completed Student Permission Forms.
- ◆ Recruit students and create student teams for the STEM Challenge.
- ◆ Provide guidance and advice as your teams work through building their launching and payload protection devices.
  - Remind teams to review challenge requirements BEFORE submitting online.
- ◆ Ensure that students complete STEM Challenge Student Feedback forms.
- ◆ If one or more of your teams qualifies for the STEM Challenge Symposium:
  - Ensure that all required information is provided in a timely manner.
  - Arrange transportation for you and your students to attend the STEM Symposium.
  - Attend the STEM Symposium with your students.



If you have questions or need additional information, please contact us at:

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Visit us on the web at:

<https://afrlnm.com/stem/missions/stem-challenge/>

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