

MESA SPRING CHALLENGE RULES

2025–2026 (DRAFT)

STEM Communication Challenge

LEVEL: Middle School and High School

DIVISION(S): None (All participants compete within their school site)

COMPOSITION OF TEAM: 2–4 students per team

NUMBER OF TEAMS: Determined by each participating school site

SPONSOR: Proposed by Tanvi Dwivedi from Stockton Early College Academy MESA

OVERVIEW

The STEM Communication Challenge encourages students to develop the ability to clearly explain scientific and engineering concepts to a general audience.

Teams will prepare and deliver a short presentation explaining a STEM concept, technology, or engineering solution in a way that is understandable to individuals without specialized technical knowledge. Presentations may take different formats such as a traditional explanation, demonstration, or creative format (e.g., skit, role-play, or storytelling), provided the STEM concept is communicated accurately and clearly.

Participation logistics and limits may vary by school site. Advisors and students are responsible for verifying details with their local MESA advisor.

MATERIALS

Teams may use the following materials during their presentation:

- Poster board or visual diagrams
- Slides or digital presentations (if permitted by the host site)
- Simple demonstration materials or small models

No specialized laboratory equipment is required.

GENERAL RULES

1. Teams must consist of **2 to 4 students**.
 2. Prior to the Spring Challenge event, teams must select and research a **STEM concept, technology, or engineering process** that they will present.
 3. Example presentation topics may include, but are not limited to:
 - a. Renewable energy technologies
 - b. Artificial intelligence and machine learning
 - c. Structural engineering and bridge design
 - d. Climate change mitigation technologies
 - e. Engineering solutions to environmental challenges
 4. Teams must design their presentation for a **non-technical audience**, focusing on clarity and accessibility of the explanation.
 5. Teams may use visual aids or creative communication formats such as **posters, diagrams, slides, demonstrations, skits, role-play, or storytelling** to support their explanation. Regardless of format, the STEM concept must be explained clearly and accurately.
 6. Presentations may not exceed **five (5) minutes**. All team members should actively participate in the presentation.
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JUDGING

1. Judges will determine team order by random selection and will post the team order prior to the start of competition.
2. The team must be ready to present when called or may forfeit the competition.
3. Only judges, MESA staff, and competing teams will be allowed in the competition room.
4. Presentations may not exceed **five (5) minutes**. Once five minutes has elapsed, teams will be stopped and prevented from speaking beyond the time limit.
5. Judges will provide time signals at the following intervals:
 - One (1) minute remaining
 - Thirty (30) seconds remaining
 - Five (5) seconds remaining
6. At the conclusion of each presentation, judges will evaluate each team according to the **Scoring Sheet**. Judges' scores will be averaged to determine final rankings.

7. In the event of a tie, the team with the highest **Clarity of Explanation** score shall be the winner. If teams remain tied, duplicate awards may be given.
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AWARDS

Awards will be given **per school site**.

Medals will be awarded for:

- 1st Place
 - 2nd Place
 - 3rd Place
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ATTACHMENTS / APPENDIX

- Score Sheet – STEM Communication Challenge
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SCORE SHEET – STEM COMMUNICATION CHALLENGE

Copies of this inspection and score sheet will be provided by the MESA Spring Challenge host site.

Student Names: _____

School: _____

Team Members: _____

Presentation Topic: _____

Judging Criteria

Category	Description	Points (1-5)
Clarity of Explanation	Concept is explained clearly and is easy for a non-technical audience to understand.	_____
Accuracy of Content	Scientific or engineering information is correct and well understood by the team.	_____
Organization	Presentation has a logical structure with a clear introduction, explanation, and conclusion.	_____
Audience Awareness	Team effectively simplifies complex ideas and avoids unnecessary jargon.	_____
Engagement & Delivery	Team communicates confidently and uses visuals, demonstrations, or creative formats effectively.	_____
Team Participation	All team members contribute meaningfully to the presentation.	_____

Total Score

Total Points (Maximum 30): _____ / 30

Judge Comments (Optional)

Judge Name: _____