

MESA TANK

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|-----------------------------|--|
| LEVEL: | Grades 9-12 |
| TYPE OF CONTEST: | Individual/Team |
| COMPOSITION OF TEAM: | 2-3 Students per team |
| NUMBER OF TEAMS: | Preliminary – Determined by your MESA Center Regional – 3 teams per MESA Center |
| SPONSOR: | Beatrice Prieto. Director, Fresno MESA Center |

OVERVIEW: Have you ever wanted to pitch a MESA Competition to MESA staff/judges. Here is your chance! We are looking for a team that has an innovative STEM Competition that can be piloted in the next MESA Day Competition: **Participation logistics, limits, and competition facilities may vary by host site. Advisors and students are responsible for verifying this information with their center director.**

MATERIALS: The Host Center will provide the following:

- Overhead projector
- Table

The student presenter will provide the following:

- Demo of project competition
- Laptop if needed
- Written rules for their competition (3hard copies, one for each judge)

GENERAL RULES:

1. Project competition must be safe to participants, judges, and audience.
2. Must be a STEM related or a NAE Grand Challenge competition.
 - a. NAE Challenges can be found at <http://www.engineeringchallenges.org/>
3. Must be original work of team. Commercial models/kits may not be used as a competition.
4. Demo of project competition should be completely build
5. Must be ready to demonstrate how competition project works at pitch presentation.
6. Project competition demo cannot exceed 50cm x 50cm x 50cm
7. Project competition demo cannot exceed more than \$10.00. (Recyclable materials are highly recommended)
8. Total price of project competition demo must be presented at time of presentation. (please have documentation ready for possible verification)
9. Rules for competition must be written (Computer generated) and include: overview of competition, list of materials, general rules, and three math questions related to project and judging guideline.

PRESENTATION GUIDELINES:

1. Must include introduction
2. State which NAE Grand challenge was applied (only if it applies)
3. Design of demo project competition
4. Cost of demo project competition
5. Demonstrate how your competition will be judged

JUDGING:

1. Judges will assemble all competing teams of students in the assigned room, read the rules, explain procedures, clarify judges' scoring criteria, and answer any related questions.
2. Judges will determine team order by random drawing and will post the team order prior to the start of competition.
3. Once a team is called the team must give a maximum of three-minute pitch presentation. A two-minute follow-up of questions will be given by judges.
4. Students will be given two minutes to setup before presentation
5. You must give each judge (Maximum of three judges) a copy of your written rules..
6. Only judges, appointed staff and competing teams will be allowed in the room.
7. Judges will provide time signals for students at these intervals: One (1) minute, Thirty (30) seconds, and Five (5) seconds.

AWARDS:

- Medals will be awarded for 1st, 2nd, and 3rd place

ATTACHMENTS/APPENDIX:

9th-12th grade Presentation Rubric

MESA Tank Rubric

Student Names: _____

School: _____

MESA Center: _____

Excellent = 5 *Good = 4* *Average = 3* *Fair = 2* *Poor = 1*

Part I: Presentation

Rate the presentation on each point:

| | | | | | |
|--|---|---|---|---|---|
| 1. Introduction gained attention and interest | 5 | 4 | 3 | 2 | 1 |
| 2. STEM or NAE Grand Challenge clearly stated | 5 | 4 | 3 | 2 | 1 |
| 3. Design of demo project competition demonstrated | 5 | 4 | 3 | 2 | 1 |
| 4. Cost of demo project competition discussed | 5 | 4 | 3 | 2 | 1 |
| 5. Clearly explained process of how competition will be judged | 5 | 4 | 3 | 2 | 1 |

TOTAL POINTS _____

Part II: Demo Competition Rules

Rate the rules on each point

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|--|---|---|---|---|---|
| 1. List of Materials is included | 5 | 4 | 3 | 2 | 1 |
| 2. General Rules are clearly stated | 5 | 4 | 3 | 2 | 1 |
| 3. Judging guidelines are clearly stated | 5 | 4 | 3 | 2 | 1 |
| 4. Three math problems are included in the rules | 5 | 4 | 3 | 2 | 1 |
| 5. Rules are written in the correct format | 5 | 4 | 3 | 2 | 1 |

TOTAL POINTS _____

Label Penalty _____

Deduct 10 points if demo and rules are not clearly labeled with student names, grade, school and MESA Center

GRAND TOTAL _____

Maximum Points is 50