



New Mexico Mathematics, Engineering, Science Achievement, Inc.

33rd Annual MESA Day



Designing for Equity

Middle School: April 13, 2021

High School: April 15, 2021

Virtual Via Zoom

Official Handbook



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MESA DAY GENERAL INFORMATION

The NM MESA, Inc., Annual Statewide Math and Science “MESA DAY” is designed to encourage the concept of problem solving through teamwork. It salutes NM MESA students for their commitment to academic excellence and reinforces the NM MESA mission of preparing students from historically underrepresented ethnic groups for college majors and careers in math, engineering and science. In keeping with our mission, advisors are encouraged to assemble teams that are representative of the ethnic and gender diversity of their school and MESA enrollment.

COMPETITION OVERVIEW: Equity is hard to achieve and the difference between equality and equity are important. Although both promote fairness, equality achieves this through treating everyone the same regardless of need, while equity achieves this through treating people differently dependent on need. Equity applied to design starts with looking at systems that unfairly privilege some over others and asks questions about what can be done to level the playing field.

All of our events will address the topic of Designing for Equity. NM MESA schools are invited to participate in our MESA Day as follows:

- On Site Science-Equity in Science Gameshow
- On Site Math-Let’s Kahoot: Math Trivia
- On Site Art Achievement-MESA Poetry Slam
- On Site Engineering-Building for Equity
- Prepared Design-Designing for Equity

ALL TEAMS: The MESA Day competition will run like a MESA Medley. Each team will be composed of 2-4 students. If schools have multiple teams, full team(s) of (4) members must be created before building an additional team. *Example:* Team 1 must be complete before adding a Team 2. Team 2 can then be partially complete.

All team members will work together on the Prepared Design event. However, students will compete individually in their assigned event. If a team has less than (4) members, they can only compete in the number of events they have team members for. Each team is allowed to have (1) named alternate. Team names **MUST** be declared as follows: (School) (Level) – (Team #). *Example: Mesaville High School – Team #1*

ELIGIBILITY: All participating teams must come from official New Mexico MESA School Programs. Schools must be considered official, and advisors must enter all profiles (A-2's) and submit all A-1's to their Regional Coordinator's Office by **10 AM MST, Monday, March 22, 2021**. Only the students listed on the roster (have their A-2 submitted and have their A-1's submitted) will be eligible to participate. **NO EXCEPTIONS!**

Of Special Note to Middle/Junior High Schools serving 9th grade students – Each middle/junior high school that includes a 9th grade class is allowed to have an event team with a maximum of 50% 9th grade students. These teams will compete in the Middle School division **only**. **No** 100% 9th grade teams will be allowed in middle school competition.

ATTENDANCE AND QUALIFICATION: All schools will be allowed to participate in MESA Day as follows. Please use the table to determine the number of teams your school can bring. This is different from previous years' allotment.

MESA Day Track	
Small School: <= 30 profiles	Max number of teams=2
Large School: >=31 profiles	Max number of teams=4

PLAGIARISM AND ADVISOR POLICY:

Academic honesty and personal integrity are essential to ensure future success as college students and STEM Professionals. As such, NM MESA expects that the work will be solely the work of the students. If the work or ideas of another are used to further students' work, then proper credit must be given to the owner. Failure to do so will result in an act of Plagiarism. If it is determined that a student committed plagiarism, they will be disqualified from the competition and will be ineligible to receive any awards. They may also risk further sanctions from MESA USA and/or their MESA State.

Due to the nature of a virtual competition, the event will be done with the trust that all students will abide by this policy. There will be unmonitored times and we are unable to determine who may be in the same room with the competing student. All onsite events are to be completed individually with the assigned student solely completing the task. The prepared design event should be completed by the entire student team.

Advisors (or non-competitors) are NOT allowed in any competition. All advisors are expected to assist their teams with meeting deadlines, register their teams, assist their students to ensure they log in correctly, are where they need to be, and that the prepared design is saved and submitted correctly. Any complaints and/or appeals need to be addressed by the students to the Event Coordinator during the event.

It is recommended (and placed in the Agenda) to meet with your competing students the morning of the event (in your own platform) to verify everyone's attendance and that all students understand the day's events.

TECHNOLOGY: Students arriving late to their assigned competition will participate at the discretion of the lead judge. Extra time might not be allotted to any student arriving late. Because this will be a virtual event, please ensure students are at a location with reliable internet and are using technology that is compatible with the applications described. Prior to the event, full information will be provided to all registrants that will include contact information for event coordinator, final event schedule, log in information, test sites, etc. All events will have an allotted time to allow for all students to log in as needed.

All students are required to be on camera for our onsite events. In addition, all videos submitted for the Prepared Design Event as well as the top scorers in the Onsite Art Achievement event will be publicly shared for a People's Choice Selection. If there are any issues with this policy, additional information must be provided during registration and approval must be granted in advance.

SCORING SUMMARY: Final team rankings will be based on the total score, which is derived by adding all of the component scores. *NOTE: Results are not final until overall results are reported.*

On Site Science	100 points
On Site Math	100 points
On Site Engineering	100 points
On Site Art Achievement	100 points
Prepared Design	150 points
Total	550 points

AWARDS: (Middle and High School)

Overall Teams: Placing 1st-3rd Overall

- Trophies will be awarded to the top 3 overall teams (1st-3th Place).
- Awards will be presented to individual team members placing 1st – 3rd Place.
 - 1st Place-Chromebook Computer (Approximately \$200 Value)
 - 2nd Place-\$75 Gift Card
 - 3rd Place-\$50 Gift Card

Individual Event Awards:

- Awards will be presented to the top student in each individual event (1st Place).
 - Award may be event specific (Approximately \$50 Value)
- Additional awards may be provided.

People's Choice Awards:

- The day of the Award Show, the Prepared Design Videos and the top scorers in the Onsite Art Achievement Event will be available for Public Viewing.
- Individuals may vote, (1) vote per IP Address. The vote will collect selection(s) for all divisions and events.
- Awards will be presented to the top winners in each division/event (Approximately \$25 Value)

IMPORTANT: Awards will not be presented at the MESA Day Competition. To ensure accuracy and to accommodate all virtual schedules, final scoring will occur upon the conclusion of the event and a live virtual announcement will be done at 3:00 PM on April 16, 2021.

DISQUALIFICATION: Individual event teams can be disqualified for the following:

- Any team member not having a Student Profile (A2) in database or A1 on record
- Anyone else completing or helping with task that is not the registered student
- Prohibited advisor, parent, or other “outside” assistance in events
- Lead judge disqualifies an event team for not following event guidelines
- Unauthorized use of cell phones during event(s) to include phone calls, internet, and/or texts
- An event team is found to have violated event guidelines after competition has concluded
- General inappropriate behavior at any time during the competition
- If after competition is concluded, it is found that any team violated rules or requirements for any event, they may be disqualified from competition and will forfeit any qualification or placement spots they may have earned.

ADDENDUMS AND EVENT RESOURCES: There are several addendums and resources which will be useful in preparing for MESA Day. All addendums will be available on the NM MESA-MESA Day Event Website. These include:

- Any Final Logistical Information
- Prepared Design Template (in Word and Google Doc Format)
- Event Resources and Helpful Preparation Information
- MESA Day Frequently Asked Questions (FAQ)
 - Will be changed throughout year as questions arise

It is the responsibility of the school program to periodically check for resources and updates. Before competition date, it is STRONGLY encouraged as the FAQ section will contain any clarifications and/or addendums to the event handbook and these will be followed at competition. The FAQ document is an official MESA Day Document and is the official addendum to this handbook.

GENERAL NOTES: Students should be instructed to demonstrate good sportsmanship and will be held accountable for any misbehavior.

Cell Phone usage –Advisors are asked to follow and remind their students about appropriate cell phone protocol. Judges will repeat this cell phone usage reminder at the beginning of each competition and will relay what is allowed and not allowed. Failure to comply may lead to disqualification.

STATEWIDE OFFICE MIMS CREDIT:

Students that submit items at the initial registration deadline will receive an “Other Competition” Participation Credit in MIMS. Students that actually compete in the MESA Day Event will receive a MESA Day Participation Credit in MIMS.

MESA DAY REGISTRATION: This is required for any team wanting to attend MESA Day. All qualification registration and submittal of materials will be done via the Cvent System with a direct link on the MESA Day Event Page on the NM MESA Website. **ALL REGISTRATION WILL NEED TO BE SUBMITTED ELECTRONICALLY BY MONDAY, MARCH 22, 2020 AT 10 AM MST.**

The day before the event, advisors will be sent a final spreadsheet of attendees. The morning of the event, advisors will be asked to send any modifications to your registration by 9AM to anita@nmmesa.org.

There is not a registration form collected in hard copy, but the following information will be needed to complete on-line registration. (1) Registration will be done per school and will collect all needed information for MESA Day participation.

Information You Will Need Per School Registration:

- How many teams you are bringing (and eligible for)
- What students are doing what event?
- Unique Email Address
- School Name, Level (HS or MS), Region
- Advisor Information and Contact information (phone, email, mailing address)
- Student Names, Contact Information (phone, email, mailing address), and Assigned Event.
 - NOTE: There have been problems with student school emails accepting emails from the nmimesa.org domain. ENSURE that there is a good email as direct contact will be made to the competing student(s) by the Event Coordinators as needed.
- (1) Alternate Per Team with Contact Information (phone, email, mailing address).
- Any specific team requests and/or information

Team Submittals You Will Need to Upload Per Team in School Registration:

- Prepared Design materials as listed below are required for participation in MESA Day.
- User Profile Template:
 - MUST be submitted in Portable Document Format (.PDF) as (1) Document.
- Project Video Link:
 - Must be accessible for public view in YouTube, Vimeo, Dropbox, Google Drive or similar format. Ensure access before submitting.



MESA DAY COMPETITION GENERAL AGENDA

Tuesday, April 13, 2021: Middle School - Thursday, April 15, 2021: High School

TIME	Description	Zoom Code
8:00 AM	Judges Report for Event Orientation Advisors Meet with Teams Individually as Needed	<i>TBD</i>
9:00 AM	Modified Registration Due	
9:00-9:45 AM	Event Kickoff and Welcome: All Participants Log In	<i>TBD</i>
10:00-4:00 PM	Event Competition (See Individual Agendas Below)	
4:00 PM	Closing Remarks: All Participants Log In	<i>TBD</i>

Individual Event Agendas

Onsite Engineering:

10:00-10:45 AM	Competition Instructions and Open Package “Impound”	<i>TBD</i>
12:00-12:30 PM	Check In Session: Questions or Problem Solving	
1:15-2:15 PM	Submission Deadline and Closing Event Judging	

Onsite Art Achievement:

11:00-11:45 AM	Competition Instructions, Presentation Order, and Examples	<i>TBD</i>
12:30-1:00 PM	Check In Session: Questions	
2:30 PM	Submission Deadline	
2:30 PM-4:00 PM	Judging and Showcase: <i>Event May End Earlier</i>	

Onsite Science:

10:00-11:00 AM	Competition Instructions, Practice Round	<i>TBD</i>
11:00-12:00 PM	Competition Rounds: 3 Rounds at 15 Minutes Each with Breaks	
12:00-12:30 PM	Event Closing	

Onsite Math:

10:00-11:00 AM	Competition Instructions, Practice Round	<i>TBD</i>
11:00-12:00 PM	Round 1 of Event	
12:30 PM	Round 1 Scores Posted and Advancing Students Announced	
12:45-1:45 PM	Round 2 of Event	
2:15 PM	Round 2 Scores Posted and Advancing Students Announced	
2:30-3:30 PM	Round 3 of Event	

Awards Ceremony – Friday, April 16, 2021

9:00 AM	Prepared Design Videos Posted for Public View	<i>Website</i>
12:00 PM	Top Competitors: Onsite Art Achievement Posted for Public View	<i>Website</i>
	People’s Choice Voting Opens: Prepared Design and OS Art	<i>Website</i>
2:30 PM	People’s Choice Voting Closes: Prepared Design and OS Art	
3:00 PM	Awards Ceremony: All Participants Log In as Desired	<i>TBD</i>

MESA Day Event Information:

For On Site Events: Additional information for all on site challenges will NOT be provided in advance, beyond what is below. You are reminded that only (1) student will complete each challenge.

All On Site Events will use the following online platforms during the event:

- Event meeting room: <https://zoom.us/>
- Meeting link(s) will be sent to participants before competition day

For Prepared Design: Teams will submit all materials in advance at the Registration Deadline. Nothing will occur for this event the day of MESA Day.

On Site Science

Equity in Science Gameshow

Students will compete in a remote gameshow-style, timed question and answer quiz, relating to equity and inequity in the world of science. Questions will rely on participants' background knowledge, as well as other information provided during the event, such as graphs, tables and/or short video clips. Students will participate in multiple rounds of questions. Round categories will include *Equity in Food/Agriculture, Global Water Accessibility/Equity, and General Science Trivia*.

Besides Zoom, the event will use the following online platforms during the event:

- Remote quiz: www.gimkit.com
 - Can be used via cellphone or personal computer
 - Please make sure these domains are unblocked or accessible to ensure Gimkit works correctly:
www.gimkit.com - for our main site, blog and helpdesk
www.gimkitconnect.com - for our game servers
 - If participants are disconnected during the game, they can re-connect using the game provided at competition time.
 - Students will be instructed to log in to the game using the following format:
SchoolNameTeam# (example: *PecosHS2*).

Advisors, please ensure that participating students are familiar with participating on gimkit.com by exploring the following resources:

- Gimkit YouTube Tutorial: <https://www.youtube.com/watch?v=CFLml6Cky1M>
- Gimkit practice round: <https://www.gimkit.com/live/5fb6d5fff5c576002299e8c8>

On Site Engineering

Building for Equity

For this engineering challenge, students will receive a mailed package through USPS of materials needed and to be used during the designated date/time for the onsite event. Students should **NOT** open the package until instructed to do so on the day of competition by MESA event coordinators. Students are encouraged to explore the mechanics of engineering, drafting and design for this competition. Because materials will be mailed in advance, it is critical that proper mailing addresses are provided during registration to insure that the package is received by the date of the competition.

On Site Math

Let's Kahoot: Math Trivia

Students will compete in an online Math competition. Questions will rely on participants' background knowledge, as well as other information provided during the event, such as graphs, tables and/or short video clips. Students are expected to have paper and a pen or pencil, as well as access to email, on the day of competition. *Students should be prepared* to submit pictures of the set-up, calculation, and answers to problems if requested.

Students will participate in a Round Robin Tournament with (3) Levels of Competition. After each round, scores will be posted and invites will be sent to advancing students. You only need to participate in Round(s) 2 and/or 3 if you have advanced.

Students will answer questions on:

- General mathematical logic with short calculations or projections.
- There will be one or more problems involving real life planning and calculations to obtain the answer for problems relating to our theme of Designing for Equity.
- Students should also familiarize themselves with at least (1) Historic Mathematician whose work significantly influenced and improved the lives of their communities. *Selected Mathematician should be an individual who personified equity and/or diversity (cultural, gender, etc.).*

Besides Zoom, the event will use the following online platforms during the event:

- Remote quiz: www.kahoot.com
 - Can be used via cellphone or personal computer
 - Please make sure these domains are unblocked or accessible to ensure Kahoot works correctly.
 - If participants are disconnected during the game, they can re-connect using the game provided at competition time.
 - Students will be instructed to log in to the game using the following format: SchoolNameTeam# (example: PecosHS2).

Advisors, please ensure that participating students are familiar with participating on Kahoot by exploring the following resources:

- Kahoot YouTube Tutorial: <https://youtu.be/pAfnia7-rMk>
- Free Sample Kahoot Games: <https://kahoot.com/academy/study/>

On Site Art Achievement

MESA Poetry Slam

For this STEAM event students will create and present a unique poem with a Science, Technology, Engineering and/or Mathematics theme. Each student will have up to 3 minutes to present their poem to peers and a panel of judges. The poetry and presentation rubric will be released on the morning of competition. STEAM students will be expected to have paper and a pen or pencil, as well as access to email, on the day of competition.

People's Choice Selection:

- The top scorers will be compiled for a public viewing the day of the Award Show. Individuals can vote (one vote per IP Address) and a People's Choice Award will be given.

Prepared Design

Designing for Equity

Competition Overview:

Simply stated, *Designing for Equity* means designing to minimize or eliminate barriers to opportunities for success. According to the World Health Organization, equity is the absence of avoidable or remedial differences. Those differences can be defined socially, physically, physiologically, geographically, economically, or demographically. Given the current state of the world, *Designing for Equity* has never been more important.

The Creative Reaction Lab, explains that “Equity-Centered Community Design is a unique creative problem solving process based on equity, humility-building, integrating history and healing practices, addressing power dynamics, and co-creating with the community. This design process focuses on a community’s culture and needs to create a future with equity for all. Through Equity-Centered Community Design, we are building and supporting an emerging movement of equity designers who take on systems with self- and systemic-awareness of oppression, creativity, and action. These designers—students, activists, organizers, educators, government staff, hospital workers, and beyond—seek to disrupt and dismantle these challenges in, and with, their communities: school, city, family, culture, and so on.”

For this project, student teams will identify an individual or group who experiences some type of inequity (i.e., a user). Teams will employ human-centered design practices, engineer a mock prototype, and deliver their chosen solution via video.

Examples of *Designing for Equity* can be (but are not limited to) projects that address:

- A physical or learning disability;
- Food scarcity;
- Access to healthcare;
- Access to clean water or other resources;
- Access to employment or education; or
- A social inequity.

Competition Components:

The components listed below will be used to assess the effective implementation of a human-centered design approach in the context of designing for equity, effective implementation of the engineering design process, the design of the prototype, and the delivery of the chosen solution.

- User Profile - The objective of the profile is to provide a summary of the human centered design process. The profile will emphasize the research the team has completed for the project.
- Mock Prototype- Team will create a mock prototype and provide an overview of the prototype functionality including a technical explanation of the theoretical mechanical operation(s).
- Project Video - The objective of the video is to give a project overview and convince the audience that the design meets the user’s needs and has value as a product to address an issue of inequity.

Scoring Summary:

Below is a summary of the point values for each component:

User Profile	50 points (33%)
Mock Prototype	50 points (33%)
Project Video	50 points (33%)
Total	150 points (100%)

MESA USA:

This competition is independent from MESA USA. Team(s) are allowed to use the same project for both competitions, but team(s) must complete the individual components for each competition and recognize that requirements are different for each competition. Teams cannot continue working on a project started in previous years and must be the original work of the current team(s).

General Rules:

1. See the rubrics and sections for user profile, mock prototype, and project video to find detailed specifications.
2. Shared roles are encouraged, but not required. Due to current distance requirements and virtual setting, team members may divide out roles. In User Profile and in Video, team must describe team roles.
3. Software platforms to create your prototype are allowed, but not required. A hand created prototype will be worth the same as a software created prototype.
4. Teams will submit all products in advance during registration to be eligible to compete in MESA Day.
5. Judges will evaluate all submitted materials.

Event Procedure and Submission:

1. For the User Profile and Mock Prototype Sections:
 - a. Team(s) are required to complete the submission template. Submission template will collect team information and required information. **Available on the Event Website.**
 - b. The submission template **MUST** be saved as a .PDF document **WITH** the school and team number in the document title.
 - c. During registration, you will upload the required PDF submission template for each team.
2. For the Project Video:
 - a. Videos should be created in a format that can be uploaded as described below.
 - b. Videos are to be uploaded to a Dropbox, Vimeo, Google Drive, YouTube, or similar media sharing account with settings set to public.
 - c. During registration you will provide the link for public viewing and review.
 - d. If a video cannot be opened or viewed by our judges or during the public showcase it will not be scored. Please ensure all sharing settings are applied.
 - e. Video must be available through April 30, 2021.

User Profile

Objective: The User Profile provides an overview of the human centered design process used in the entire project. Teams must use the User Profile Template (**see Event Website**).

Required Elements

- Problem Statement: Describe the people who will benefit from the project and the challenges they face. Discuss the issues of inequity that the project hopes to address.
- User Research and Methodology: Discuss key information about the users gathered through your research, interviews, and ongoing discussion with the user throughout the project. The

information shared here should be directly related to the user's needs, insight, goals, and prototype.

- **User Insight:** Discuss your team's understanding of the experiences, emotions, and motivations of the users. This insight should inform the rest of the project and help the reader have a deeper understanding of the inequity of the user.
- **Current Solutions:** What are current solutions that you have researched to help you solve your problem?
- **Prototype Iterations:** List (3) iterations of your prototype before arriving at your final prototype. What were the main design considerations in each one and what changes were made in each one and why?
- **Prototype Tests:** Testing is important in the Engineering Design Process. Because this is a theoretical prototype, what tests would be important for data collection to determine if the prototype meets the needs of the user?
- **User Feedback:** What feedback did you collect to ensure your prototype met the needs of the user?

Mock Prototype

Objective: The Mock Prototype provides an overview of the prototype functionality including a technical explanation of the theoretical mechanical operation(s). Teams must use the User Profile Template (**see Event Website**).

Required Elements

Team(s) must answer the required questions in the template and have drawings or photos that show the various views of the prototype. For the template, the following is required:

- **Technical Elements:** List key features, illustrating that the design will adequately meet project goals. Also include any STEM concepts that helped with your design.
- **Design Rationale and Challenges:** How did your final design meet the needs of the user?
- **Design Considerations:** There are many things that go into a final build of a prototype. They can include material considerations, cost considerations, limitations, needed skills, etc.
- **Prototype Photos/Drawings:** include (4) showing each view of the prototype (front, back, side 1, and side 2). At minimum, one picture/drawing should be labeled with key design elements. Scale should be included in photos/drawings as needed.

Prototype Rules

1. The prototype can be theoretical and/or does not have to work.
2. Prototype can be a drawing, graphic, and/or physical model. The same design considerations need to be taken with whatever method is chosen. There is no score advantage to using one method over another.
3. If it is a physical model, it does not have to be built from the actual proposed materials, it can be built to look like the envisioned prototype.
4. If it is a drawing or graphic, computer software is allowed to be used.
5. All prototypes should be created to scale and a scale ratio should be included.

Project Video

Objective: The objective of the video is to give a project overview and convince the audience that the design meets the user's needs and has value as a product to address an issue of inequity. Students will prepare a creative, engaging video to showcase their project. The video should define the problem;

provide a description of their user and their needs; and show how their prototype helps with the identified inequity.

Required Elements

- User Introduction and Problem Addressed:
 - Describes the user.
 - Describes the problem the team is solving and its impact on the user.
 - Describes how design requirements keep target users in mind.
- Product:
 - Defines the proposed solution through the prototype.
 - Describes how the solution promotes equity in the user's lives.
 - Uses the prototype (actual, model, photo, and/or drawing) in the video.
- Overall Quality of the Video:
 - Effectiveness of speech organization and delivery.
 - Audience engagement – ability to hold audience's attention.
 - Presentation skills – it is a well-organized video and presenter(s) are able to convey well.
 - Product delivery-students used skills to create a quality media product
 - Closing statement - the speech ends with a final statement that summarizes the user, problem, and solution in a memorable manner.

Video Rules

1. Video can be no longer than 3 minutes. Nothing will be scored/viewed beyond the 3-minute mark.
2. All videos must be respectful of the broad spectrum of NM MESA stakeholders' cultural backgrounds and experiences.
3. All individuals in the submitted video are expected to abide by their schools and NM MESA's code of conduct including dress and language. Video and all included music must be free of profanity, inappropriate, and/or vulgar language and/or content.
4. Teams are encouraged to be creative and use additional audio and visual aids to enhance their video.
5. All video links will be shared for a public showcase the day of the awards presentation and a People's Choice Award will be given.

School: _____ Level: HS / MS Team #: _____

User Profile Rubric:	LEVEL OF MASTERY					
	Exceptional (5 points):	Excellent (4 points)	Met Criteria (3 points)	Fair (2 points)	Poor (1 point)	Not Present (0 points)
Problem Statement: Adequately describes the people who will benefit from the project and the challenges they face. Defines the issue of inequity addressed.						
User Research: Adequately discusses key information about users gathered through research, interviews, and ongoing discussion throughout the project.						
User Insight: Demonstrates a good understanding of the experiences, emotions, and motivations of the users.						
Current Solutions: What are current solutions that you have researched to help you solve your problem? At least 2 must be presented.						
Prototype Iteration 1: What were the main design considerations in your first design iteration? What were pros/cons of the design? Any changes made to this design?						
Prototype Iteration 2: What were the main design considerations in your 2 nd design iteration? What were pros/cons of the design? Any changes made to this design?						
Prototype Iteration 3: What were the main design considerations in your 3 rd design iteration? What were pros/cons of the design? Any changes made to this design?						
Protoype Tests: Because this is a theoretical prototype, what tests would be important for data collection to determine if the prototype meets the needs of the user? 2 Tests.						
User Feedback: What feedback did you collect to ensure your prototype met the needs of the user?						
Overall Quality: Submission has quality responses within word limit. This also includes spelling, grammar, thought, answering the questions completely and succinctly.						
COLUMN TOTALS:						
TOTAL:						

Judge Name: _____

Judge Comments:

School: _____ Level: HS / MS Team #: _____

Mock Prototype Rubric:	LEVEL OF MASTERY					
	Exceptional (5 points):	Excellent (4 points)	Met Criteria (3 points)	Fair (2 points)	Poor (1 point)	Not Present (0 points)
Technical Elements: List key features, illustrating that the design will adequately meet project goals. Also include any STEM concepts that helped with your design.						
Design Rationale and Challenges: How did your final design meet the needs of the user?						
Design Consideration 1: There are many things that go into a final build of a prototype. Describe an important consideration and why it would be important. (Material, cost, skill, etc)						
Design Consideration 2: There are many things that go into a final build of a prototype. Describe an important consideration and why it would be important. (Material, cost, skill, etc)						
Design Consideration 3: There are many things that go into a final build of a prototype. Describe an important consideration and why it would be important. (Material, cost, skill, etc)						
Design Consideration 4: There are many things that go into a final build of a prototype. Describe an important consideration and why it would be important. (Material, cost, skill, etc)						
Pictures Present: (4) Pictures/Drawings are available of the requested views-Front, Back (2) Sides. Can you visualize the prototype with what is provided? Quality images?						
Labeling Key Design Elements: At least (1) picture/drawing should include labels of key design elements. Can you ascertain what it important based on submission?						
Prototype Scale: Is provided and is able to be understood based on submission. Pictures/drawings adhere to scale.						
Overall Quality: Submission has quality responses within word limit. This also includes spelling, grammar, thought, answering the questions completely and succinctly.						
COLUMN TOTALS:						
TOTAL:						

Judge Name: _____

Judge Comments:

School: _____

MS HS

State/Center: _____

Project Video Rubric:	LEVEL OF MASTERY					
	Exceptional (5 points):	Excellent (4 points)	Met Criteria (3 points)	Fair (2 points)	Poor (1 point)	Not Present (0 points)
Problem Being Addressed: Team explains problem and their presentation increases judges' understanding of the user(s) need(s) and the solutions.						
User Description: User is identified and an adequate profile is provided.						
Design Requirements: Team explains how their prototype meets the user's needs in terms of aesthetics, functionality, ease of use, cost, or other needs.						
Product Equity: Describes how the proposed solution promotes equity in the user's lives.						
Audio/Visual Aids: How well does the team incorporate the prototype in the video? Can be model, drawing, photo, etc. Other audio/visual aids?						
Effectiveness: How effective was the team in organization and delivery. Prototype and purpose is conveyed well. Team delivers an effective closing statement.						
Audience Engagement: How well did the team hold the audience attention? Did the presentation flow to capture attention from beginning to end in a logical way?						
Creativity and Skill: Team used their skills to create a quality media product with creativity, intention, and thought.						
Team Use: Team members were introduced, duties were shared by all of the team, and roles of all team members were understood. Not all team members need to be present in video.						
Overall Quality: Submission is easily viewed, was within time limit, and met overall quality standards.						
COLUMN TOTALS:						
TOTAL:						

Judge Name: _____

Judge Comments: