

NM MESA Day 2012 Frequently Asked Questions
Last Updated: April 17, 2012

This document is intended to clarify any information pertaining to the upcoming MESA Day/Region Design events. This document also acts as an addendum to the MESA Day Handbook and will be followed at each competition.

GENERAL QUESTIONS:

Q: How will you check devices in impound? Do you have a checklist?

A: Yes, the checklists for the High School and Middle School Prepared Events will be posted to the MESA Day Resources section for review. Note: This also has information on the scoring for the academic display. (1/25/12)

Q: In one section in the handbook it mentions that event winners will qualify for MESA Day is this correct?

A: No, that is a typo. The top 15 OVERALL teams in both middle and high school from each region will advance to MESA Day. (2/2/12)

Q: For MESA Day can we take less than 4 students on each team?

A: It has been approved starting at MESA Day that each team can be 2-4 students REGARDLESS of how many students the preceding numbered team has. (4/17/12)

PREPARED DESIGN MIDDLE SCHOOL SURVIVAL BOAT CHALLENGE:

Q: Can we use wrapping paper, wax paper, or parchment paper?

A: No paper may be allowed if it has additional additives, properties, or coating. This includes wrapping paper, wax paper, and parchment paper (as it is coated with a nonstick surface). The coating needs to come from the used glue. (12/2/11)

Q: Can we use tape?

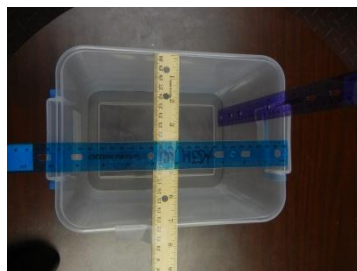
A: Tape is not allowed if it is glue attached to a material that makes it tape (an already conformed solid). (12/2/11)

Q: Will more than one boat be tested at a time in the same bin?

A: No. See picture. Each bin will only hold 1 boat. Multiple bins may be used and tested concurrently dependent on number of teams and time available. (12/2/11)

Q: Do you know the exact plastic container that will be used?

A: Yes, Sterilite 7.2 Qt./6.8 L. Dimensions are 11" x 8" x 7.5". See picture. (12/2/11)



TOP VIEW:



FRONT VIEW:

Q: If the sink marker is on one end of the boat and stays afloat, but the other side sinks below (but is not marked) will that count?

A: Yes, to avoid this judges will mark on both ends of the boat. (1/12/12)

Q: What is the boat capsizes? It is still afloat.

A: If a boat capsizes, it will be considered a sink and only the load remaining in the boat when removed from the water will be counted. So if all pennies fall out there will be no measured load. (1/12/12)

Q: If we wanted to add weight in multiple places on the boat to distribute the load can we have multiple droppers (additional hands from other team members) if all is done at one exact time in one release?

A: Yes, additional droppers will be allowed IF all weight is dropped at one time resulting in one release. (1/12/12)

Q: What if we touch the boat or don't drop in one release?

A: If the boat is touched, weight is not dropped in one release, weight is not dropped on the correct time increment, or weight is touched after the release, the trial will end and it will be considered a sink. (1/12/12)

Q: Will teams be penalized for wet pennies?

A: No, As long as team does not close hand and do additional drops. Team needs to let pennies fall naturally and team will not be assessed any penalty for wet pennies. (3/8/12)

PREPARED DESIGN HIGH SCHOOL VEHICLE TRANSPORT CHALLENGE:

Q: Do you have the dimensions of the weights that will be used?

A: Yes. 1 pound weight is 7.25cm x 6.25cm x 2.75cm. 8 ounce weight is 3.5cm x 3.25cm x 4.25 cm. 4 ounce weight is 3.5cm x 3.1-3.25cm x 2.25cm. 1 ounce weight is 3.5cm x 3.25cm x .75cm. See Pictures. (12/2/11)



Q: Can the car be carried on the return trip (ie. A student walk it back)?

A: No, the car has to travel back to the start line on the ground through the hazard area. (1/12/12)

Q: Does the trigger have to be within the 1' x 2' size requirement?

A: No, for safety, part of the trigger (ie. a long string and the student releasing the trigger) can be outside of the size dimensions. The device in ready position with the trigger attachment point needs to remain inside of the required size dimensions. (1/12/12)

Q: Is it possible for teams to tie in the performance element?

A: Yes, if there are multiple teams that can transport all weight in under the goal time they will score the same. Ties will be broken by also adding in the display score and the On-Site score as the OVERALL score determines placement and qualification. If at the Regional Design level multiple teams are easily transporting all weight in under the goal time, the goal time will be re-assessed for MESA Day. (1/12/12)

Q: Can our trigger stay at the start line or does it have to go with vehicle?

A: For safety and ease, the trigger device may stay at the start/finish line and may be physically transported to the other side to use for the return trip. We do not want the trigger to interfere with the motion of the vehicle. Examples would be a dropped coin, a yard stick setting off a trap, a stopper being used (and pulled) until forward motion is needed, etc. (1/25/12)

Q: Can a student's hands be the trigger device?

A: No, the trigger needs to be something else to set the vehicle in motion and only one trigger system is to be used. (1/25/12)

Q: Can the trigger be pulled or stretched?

A: No, the trigger cannot have any added power by the trigger so essentially the vehicle needs to be placed in ready position (loaded and ready to go), the vehicle needs to be at complete rest, the trigger to be activated, then the vehicle is to go into motion. (1/30/12)

Q: What is the new scoring criterion for the car event for MESA Day?

A: Because of so many "perfect scores" the new scoring formula will be used for MESA Day. All other components of the event will remain unchanged. (3/8/12)

MESA Day Vehicle Transport Challenge Points

Total points available for the event are 200 consisting of the following parts:

1. **Display Board: Total Points = 50.** See *Display Board Requirements* section for full details.
2. **Entire Weight Transfer Bonus =10**
3. **Vehicle Score: Total Points = 140**
 - a. Time Score = 70
 - i. Each second will result in a point deduction from 70 allowable points until 280s have elapsed = .25 point deduction/second
 - ii. Any vehicle taking 280s to transfer weight until the allowable 300s will be awarded 0 points for time
 - b. Power Score = 70
 - i. Trial Weight (oz)/Goal Weight (96oz) x 70 points = Power Score

Example: 50 oz., all 5 minutes (300s)

Team Vehicle Score = $0 + [(50\text{oz.}/96\text{oz.}) \times 70] = 36.46$ Points

Example: All weight (96 oz., 5.6s)

Team Vehicle Score = $[70 - (5.6\text{s} \times .25)] + [(96\text{oz.}/96\text{oz.}) \times 70] = 138.6$ Points

ACADEMIC DISPLAY:

Q: Does the display have to be impounded?

A: Yes, it is considered a requirement of the Prepared Design event so it will be impounded with the team device. (1/12/12)

Q: Is the maximum depth allowed really 1”?

A: No, that was a typo. It was meant to be 12” or 1’. (1/12/12)

ON SITE BRIDGE (MS AND HS):

Q: Can the Popsicle sticks have pre-made holes since there is nothing we can use in our supplies to make holes if we want to use our supplies that way?

A: Yes, they can. (1/25/12)

Q: For MESA Day will the event be the same?

A: The requirements will be the same pertaining to the needed materials and it will be a bridge (what is in the handbook), but the event parameters given on site will be different and the scenario will be different. (3/8/12)