

| Level | Competition | Overview | Tips/Reminders/Avoiding DQ's |
|---------------|--------------------------------|--|---|
| 3rd-5th | Macaroni Mechanics | Design and build a car made completely of assorted pasta that will achieve the greatest speed and distance . | <ul style="list-style-type: none"> •Pasta can be of any type but must be UNCOOKED. •All types of glue made be used except Super Glue. •Ink, markers, or pating are allowed only for decoration purposes. •The car will be released from the start line. It may not be pushed or thrown down the ramp. Teams will only get ONE run. |
| 3rd-5th | Toothpick Tower | Design and build a model tower using as few toothpicks as possible that will withstand a maximum load . | <ul style="list-style-type: none"> •Maximum # of sticks allowed, including partial sticks, is 500. •All types of glue may be used except Super Glue. •No coating of any kind may be added to the surface of any part of the tower. This includes decorative items. •The minimum height of the tower is 9". •Don't live on the edge. Allow some cushion for required dimensions. |
| 3rd-5th | Triple Egg Drop | Design and construct a container that will keep 3 eggs from breaking when dropped from 2-story building. A lab report should be included with the container. | <ul style="list-style-type: none"> •ONLY the materials listed in the rules are allowed. •Eggs must be large, white, raw, chicken eggs. Small or medium eggs not allowed. •Eggs may not be treated or hard boiled. DO NOT adhere tape or other material directly to the egg. •Don't forget the lab report! |
| 3rd-5th | Science Model- The Human Brain | Construct an original model of the human brain and answer questions from a given list. | <ul style="list-style-type: none"> •Only non-perishable items may be used. •Commercial models may NOT be used. •The model must fit within an area of 3ft x 3ft x 3ft and be freestanding. •Include a display board with the required components. •The diagram must be hand drawn. |
| 3rd-5th | On-Site Water Bottle Rocket | Design and build a model rocket that will be powered by 90psi of air pressure and achieve the longest period of time in flight. | <ul style="list-style-type: none"> •Teams will build their model rocket at UC Irvine. No premade models will be allowed. •ONLY the materials listed will be provided for construction. •The fins must be placed at least 2" away from the mouth of the bottle. •A blueprint of the model must be submitted that includes a list of materials used for their model and the specific amount of water to be used. |
| 3rd, 4th, 5th | Rehearsed Speech | Prepare and deliver a 2-minute presentation on a topic from the official topics list. A visual aid must be used to support the presentation. | <ul style="list-style-type: none"> •A visual aid may be: prop, model, chart, graph, Powerpoint, etc. •Note cards are allowed but students may not read directly from them. •Once the speaking order has been determined, late arrivals will not be permitted. |

All projects must be clearly labeled with student names, school, and MESA center or a penalty will be applied.

All students will take an individual math and science exam at the beginning of MESA Day. The exams will be based on the student's current grade level.

| Competition | Levels | Overview |
|----------------|-----------|---|
| Math & Science | 3rd Grade | <ul style="list-style-type: none"> • Multiple Choice • No calculator allowed. |
| | 4th Grade | |
| | 5th Grade | |

Complete MESA Day Competition Rules can be found on our website at:

www.cfep.uci.edu/mesa/projects

DISCLAIMER: This document is meant solely as a guide to the MESA Day projects and is not a substitute for the official MESA Day Competition Rules.