

The official e-communication  
for Colorado MESA

# eNews



Welcome to the November 2008 - Volume 3, Edition 3 of the Colorado MESA e-News electronic newsletter. Please let us know how we can assist your MESA program and make a positive difference for our MESA students. For more information on any item

mentioned in the newsletter, please contact our office at 303.352.3869 or via email at [ColoradoMESA@ucdenver.edu](mailto:ColoradoMESA@ucdenver.edu). In this edition, you'll find information on the 2008-09 Pilot Wind Energy Design Challenge, 2008 HS Fall Fling, the MESA Blog and much more. To view past newsletters or print a pdf version of the current issue, visit [www.cmesa.org/news/e-news.html](http://www.cmesa.org/news/e-news.html)

## MESA Tips – Money, Money, Money!



MESA student organized fundraisers are an additional way, or in some cases the only source of funding to purchase materials, supplies and offset the costs of field trips. Given our current economic environment, we have outlined some basic fundraising ideas to consider for your MESA program:

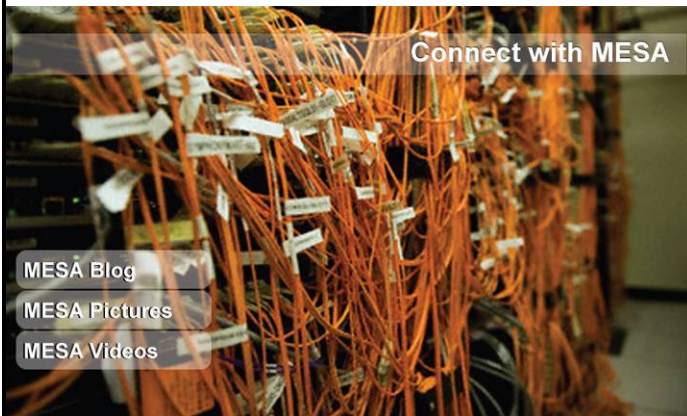
**Bake Sales & Garage Sales** - Handicrafts, used home appliances and furnishings, unwanted clothes, plants and other items you can scrounge up are great profit makers at garage sales. This is also a good place to sell baked goods such as donuts, cookies, bagels, pretzels, breads, pies, cakes and beverages.

**"Give It Up"** – Students, family, friends, teachers and community members elect to give up something and instead donate the money that would have been spent on that item to the MESA Program.

Items can include Friday night takeout (US\$30), a morning latte(US\$5), making lunch instead of buying hot lunch (US\$7). The goal is for 100% participation no matter how large or how small, reinforcing the message that the entire community is a part of the fundraiser.

**A "Dollar a day Campaign"** - A simple yet highly effective idea - each participant tried to donate at least US\$1 each day for a span of 12 days. Community members, principals, parents, family and friends can be asked to make matching pledges.

## MESA Blog, Pictures and Videos!



Connect with MESA and check out our MESA blog, pictures and videos. Share information with other advisors, students and ask questions all using the new blog. Visit our website at [www.cmesa.org](http://www.cmesa.org) to view the new blog.

Do you have MESA videos and or pictures you would like to share? If so, email us at [coloradoMESA@ucdenver.edu](mailto:coloradoMESA@ucdenver.edu).

## High School Fall Fling

The 2008 High School Fall Fling event was a success! Hosted by Multicultural Engineering Program at the University of Colorado Boulder, over 250 students, advisors and volunteers attended the two-day event on November 6th and 7th. The two day event started on Thursday with organized campus laboratory tours, a boat building design challenge and ended on Friday with the 2008-09 MESA USA Multi-task Trebuchet Design Challenge. Congratulations to all the schools, advisors and students who participated in the 2008 Fall Fling.



### **Multi-Task Trebuchet Challenge Winners**

- **1st Place** - *Pueblo East High School*  
Advisor – Jeff Osborne  
Students - Robert, William, Issac and Chris
- **2nd Place** –*Pueblo East High School*  
Advisor – Jeff Osborne  
Students – Tomas, Estevan, Mat and Zack
- **3rd Place** – *Wasson High School*  
Advisor – Joan Keating  
Students - Amanda, Ben and Mandy

### **Boat Design Challenge Winners**

- **1st Place** - Centaurus High School
- **2nd Place** – Mountain Range High School
- **3rd Place** – Longmont High School



## Wind Energy (WE) Challenge

Colorado MESA and MESA USA presents the engineering design competition specifications for the 2009-2010 year.

This is the pilot year where the specifications are used by staff and teachers to evaluate and recommend improvements. The Wind Energy Challenge event involves the transfer of energy from the wind source to the defined tasks. The maximum amount of energy available to complete the tasks will be limited to that provided by the defined commercial fan. **The device performance will be the only elements judged during the pilot year.**

### Performance

Teams will research, design, build, test and compete with a windmill device(s) designed to capture and use the available wind energy to complete the tasks. The performance of the devices will be judged in the following tasks:

Middle School:

- *Mechanical Power*: greatest mass raised 75 cm in the least amount of time.
- *Wind to Vehicle Transfer*: greatest speed achieved by the defined vehicle when accelerated by the energy from the device.

High School:

- *Mechanical Power*: greatest mass raised 75 cm in the least amount of time.
- *Wind to Vehicle Transfer*: greatest speed achieved by the defined vehicle when accelerated by the energy from the device.
- *Directional Response & Rotational Speed*: nearest combined rotational speed, of a fixed load, in revolutions per minute (rpm). Wind direction will change by 60 degrees between measurements. The target speed is 30 rpm.

**Technical Paper** - Not Included in Pilot Year

**Academic Display** - Not Included in Pilot Year

**Oral Presentation** - Not Included in Pilot Year

*Each team competing at the state and national level must consist of 4 (four) students (2 male, 2 female) who are active members of a MESA program. Teams are required to participate in all of the above-listed components at the Colorado MESA qualifying events, 2009 High School Fall Fling and 2010 Middle School MESA Days.*

The first place middle and high school teams from the MESA Day and the Fall Fling events will travel to the national competition. These teams must compete in all tasks listed above.

## MESA Program Spotlight

## Merrill Middle School

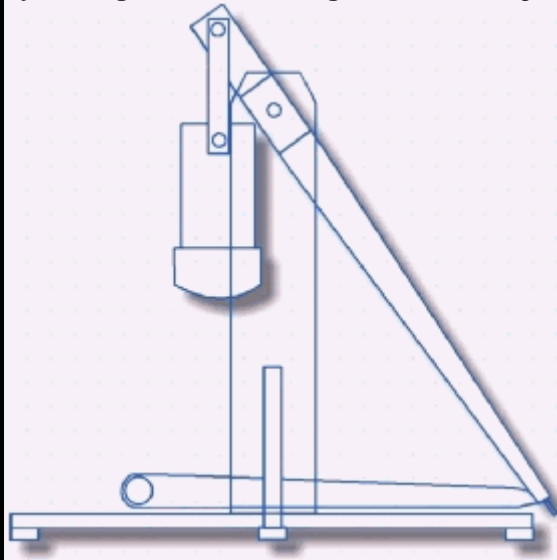


This year's MESA groups at Merrill Middle School are off and rolling. There are currently three different MESA programs being offered at Merrill Middle School: MESA After School Program; Indian Focus In-School Program and Adventure Engineering/Action Learning for 7<sup>th</sup> graders.

In the MESA After School Program, students have built models out of note cards where the goal was to have the tallest building that would remain in one place under high winds. Students have dropped eggs in the Egg Landers they designed out of the window at school. [Read more >>](#)

## MESA USA National Design Challenge Multi-Task Trebuchet

MESA USA presents its national engineering design competition specifications for the 2008-2009 year. The Multi-Task Trebuchet event involves the transfer of energy from the counterweight to the projectile being thrown. **The maximum amount of energy available to complete the tasks will be limited to that stored by raising the counterweight.** Colorado high school and middle school teams will compete in the following



four components in order to qualify for nationals:

1. Performance
2. Technical Paper
3. Academic Display
4. Oral Presentation

Please note the following areas in the revised 2007/08 rules and guidelines:

- Projectiles
- Academic Display
- Oral Presentation
- Device Inspection Criteria

The middle school qualify event is scheduled in April 2009 at the University of Colorado Denver. For more information or questions, please visit

[http://www.cmesa.org/projects/MESA\\_USA-trebuchet.html](http://www.cmesa.org/projects/MESA_USA-trebuchet.html).

## UPCOMING EVENTS

▣ [District 11 Bridge Design](#)  
December 2, 2008  
Colorado Springs

▣ [UC Boulder Design Expo](#)  
December 6, 2008  
University of Colorado at Boulder



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