

Club Spotlight: TSA - Technology Student Association

Teacher Sponsor: Mr. Elzroth

Vex robotics is part of TSA now.

1. What is the mission of the TSA Club at Manual?

The mission of TSA is: "The Technology Student Association fosters personal growth, leadership, and opportunities in Science, Technology, Engineering, and Mathematics (STEM); members apply and integrate these concepts through co-curricular activities, competitions, and related programs."

2. What are the requirements to become an TSA member? When do they meet?

Everyone is welcome to join. Membership is \$35. We meet every other Friday. Our next meeting is September 16th.

3. How many students can be in the TSA club?

Currently we do not have a limit. At our first interest meeting there were over 100 students in attendance.

4. What activities are planned for the TSA?

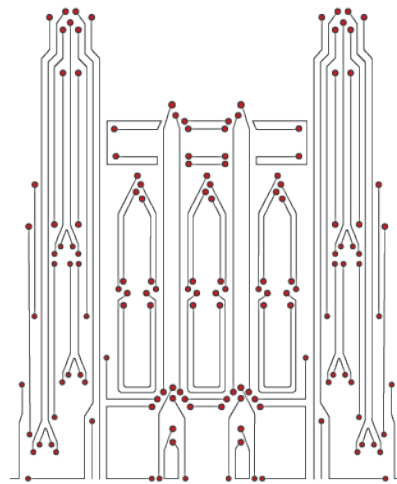
We will be having biweekly meetings and competition teams will meet on their own to practice. Regional competition are in February at EKU. The state competition is in April in Louisville. The national competition is in June in Orlando.

5. What are some goals for the year?

Our primary goal for our first year is to get as many students as we can to compete at the national level.

6. Why do you think students should consider applying to the TSA?

TSA is a nationally recognized student organization. Competing gives students the opportunities to validate their technical skills, network with other students, and develop their professional presentation skills.



Important Upcoming Dates:

8th Grade Open House	November 3, 2016
MST Dinner at CPK	November 7, 2016
Regional Science Fair	March 11, 2017
Regional Science Olympiad	March 18, 2017
State Science Fair	April 1, 2017
<small>(Please make a note before making spring break plans)</small>	
State Science Olympiad	April 22, 2017



MST Newsletter

From MST Catalysts

September/October 2016

Edition 2, Volume 1

New Half Credit Class

As of the 2016-2017 school year, science fair research projects will be a half-credit class (no longer a component of MST Biology or MST Chemistry). During Sophomore and Junior year, ALL MST students, unless enrolled in Independent Research, will earn half a class credit for an MST magnet requirement they meet which goes beyond the state high school and AP curricula. These students will graduate with a full credit of science research which will signify to universities about the research MST students are doing beyond the curricula.

The MST magnet requirements have not changed - MST magnet students are required to complete three years of research beyond their regular science classes. All MST students should have joined a Google Classroom (code: jo12pa) where the rubrics, instructions, and due dates can be found. Please check with your student to confirm their subscription to the Google Classroom.

Q: Is this going to increase the workload for my student?

A: No. There is no additional work for the students. They will be submitting the research that they were previously handing in for their MST science class

Q: My student is a freshman, are they currently taking this half-credit class?

A: No. All MST freshmen are taking the 9th grade MST science class which includes research in the curriculum. The science fair project is a part of the class so the grade for science fair is included in the student's MST science grade.

Q: I do not see this half credit class on my student's schedule. Is he/she enrolled?

A: Since the class is only for half the year, it is not on the student's schedule this fall. It will be on the schedule for the second half of the year.

Q: Why is there a change in how science fair research is graded?

A: There were many reasons for this change. One reason is to demonstrate to college and universities the amount of work that is placed into science research at Manual. Students will earn a half credit in research during their Sophomore and Junior years giving the MST students a full credit in research on their transcript. Another reason is this gives the students not enrolled in an MST class the means to be guided through their project even though they are not enrolled in a MST science class.



TO PURCHASE

Email Jennifer Hummel
jchummel71@gmail.com

MST T-Shirts \$15

MST Hoodies \$25



dMRSF Annual Fundraising Dinner

This year's Fundraising Dinner was a great success! The generosity in support of dMRSF will help us to host the Regional Fair, cover the cost for students to attend the International Science and Engineering Fair (ISEF), and to attend other similar fairs like ISweep. Without the support of the community and parent body, Manual students would not have the ability to participate and excel at National and International level science events. **Please know how much you've helped our students and how much we all appreciate it!**

Dr. Ted & Jane Smith

UofL School of Medicine

Charles & Donna Denny

Brown-Forman

Norton Healthcare

Dr. Mahesh & Shalini Jindal

Action Systems

Sterling & Amy Lapinski

POS on Cloud

Vinay & Purnima Polepalli

V-Soft Consulting

Dr. Shervin Dashti & Dr. Helen Dashti

Health Enterprises Network

GlowTouch Technologies

Dr. Sanjiv & Dr. Renu Mehta

Kleinert Kutz

Mike Battaglia & Dr. Diana Han

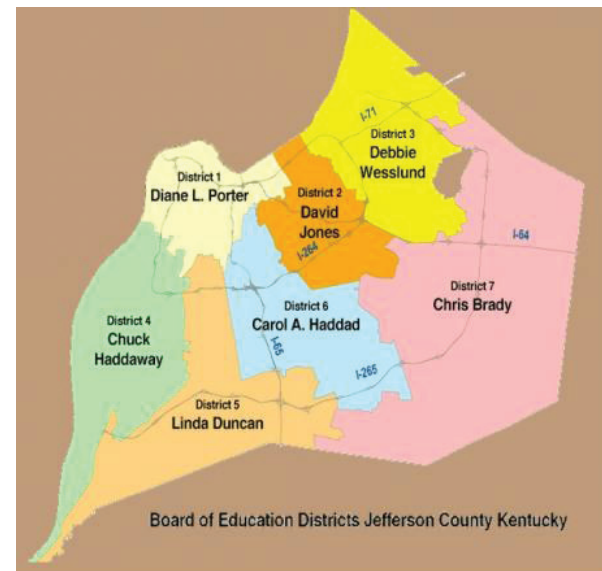
University of Louisville Conn Center

JCPS Board Forum

The 15th District PTA is hosting a School Board of Education Candidates Forum on Wednesday, October 26, 2016. Since duPont Manual High School is a magnet, Manual has students from all seven JCPS districts. Three districts will be having elections and the results may impact Manual High School. Plan to attend the forum and on election day supporting the candidate who shares your ideals. The Forum will be held at VanHoose Education Center located at 3332 Newburg Road in Stewart Auditorium. The districts electing representation are Districts 2, 4, and 7.

Timeline at the forum: District 4 is up from 5:30-6:15pm
District 2 is up from 6:30-7:15pm
District 7 is up from 7:30-8:15pm

The candidates running: District 4- Ben Gies and Keisha Allen
District 2- David Jones, James Fletcher and Chris Kolb
District 7- Chris Brady, James Sexton, S. Scott Majors, and Fritz Hollenbach



The purpose of this forum is to give candidates for School Board of Education an opportunity to address a wide range of issues that affect our school district. Each candidate will be asked the same question and be given equal time to respond. In addition, the attendees can submit questions to be asked equally to all candidates. In the auditorium we will not allow any partisan attire, literature or signs.

The news media will be invited to cover the event. The moderator for the forum will be **Toni Konz, WDRB News**. More information is available on **facebook**.

Why Science Competitions: Is the Effort Worth It?

One of the hallmarks of the MST program is the fact that our students are required to compete in research competitions. As a result they are also very active in other science competitions like Science Bowl and Science Olympiad. Because these competitions take up so much time and add to the stress our students are under an important question to ask is whether or not this involvement makes a difference to the student. The literature on science competitions is not extensive but what is out there is revealing. I wanted to pass on what research has shown about science competitions. While I have seen the student benefits of science competitions for 30 years, independent research confirms why it's an essential part of MST.

Abernathy and Vineyard (2001, 274) asked students who competed in the Science Olympiad why they did so. The number one reason was that it was fun. The number two reason was that the participants enjoyed learning new things. These findings held for both male and female participants; they seemed to think learning science and math in this context was enjoyable. If you ask our students you will get similar comments. Abernathy and Vineyard suggested that competitive events "may be tapping into students' natural curiosity and providing a new context for them to learn in, without rigid curriculum or grading constraints (2001, 274)."

Competitive events such as the Science Fair, Science Olympiad, etc., may provide the "initial motivation" and catalyst for helping students to discover the joy of learning (Ozturk and Debelak, 2008). Academic competitions can provide motivation for students to study, learn new material, and reinforce previously learned material so that they will be ready to compete and collaborate with their peers from other schools both regionally and nationally—not just in games but also in academic and work environments. This type of motivation is difficult to provide in a normal classroom environment, even at Manual. While it can be argued that this is solely extrinsic motivation and that students should not be dependent on it, it can nevertheless serve as the spark that ignites a discovery of the joy of learning science and math.

One of the more important effective benefits of these competitions, is that the participants, who may be the academic elite (big fish in a little pond), must test their knowledge and skills against the students from other schools who will be their peers once they get to college and the workplace. Ozturk and Debelak (2008) note that students "learn to respect the quality of work by other students and to accurately assess their own performance in light of the performance of their intellectual peers. They achieve an accurate assessment of where their level of performance stands in the world of their intellectual capacity and, in turn, develop a more wholesome self-concept". "Developing a more accurate and grounded self-concept is an important stage for children to go through on their way to becoming healthy and mature adults". This realistic and comparative self-assessment can be difficult to foster in the case of elite students who have never faced stiff competition or external challenges to their academic abilities in middle school.

Students in academic competitions also benefit from learning not only how to succeed, but how to accept failure, learn from it, and, "subsequently, grow as a person and improve in performance" (Ozturk and Debelak 2008, 52). This, again, may be one of the most important aspects of intramural academic competitions, one that cannot be easily provided in a typical classroom environment; learning to fail and being able to cope with the emotional aftermath may be riskier in a classroom environment than in a games environment where the experience of failure is shared among the group. Being thrust into a situation where participants must deal with failure (even after they have prepared and done their best) promotes the healthy development of a student's resilience and self-awareness. Academic competitions like the ones Manual participates in may provide the type of environment that helps students to reflect on their knowledge and abilities and self-evaluate their performance, promoting improved personal growth and development for the participants.

Of course we know that extreme competitiveness can cause anxiety and undue stress (Davis and Rimm, 2004). But Davis and Rimm also report that competition can increase student productivity and achievement. Some students seem to need to compete with others in order to push themselves to produce at a higher level. This is the mold that most of our MST students fit. It would follow that socially organized competitions help to promote high levels of achievement and productivity in our participating math and science students. Some of the increased levels of achievement and productivity may be due to the practice in teamwork and study skills promoted by participation in this type of academic competition. Bishop and Walters (2007) report that the students involved in competition increased their ability to be leaders and team players, especially in the areas of directed studying ("cramming"), communication, and stress management.

Credit to: Dr. Robert Keuch and Dr. Robert Sanford of the University of Southern Maine

Congratulations to This Year's MST 2016 National Merit Semifinalists

Vaannilaa Annadurai

Andrew Ballena

Austin Bridges

Sylvia Bosco

Rose Chancy

Emily Coffield

Joshua Dye

Ryabn Folz

Sara Frigui

Anna Gilbert

Catherine Ho

Lavanya Kanneganti

Jumin Kim

Sanjana Kothari

Rohan Kulkarni

Sofia Labrecque

Emily Liu

Vincent Liu

Diya Mathur

Lydia Mason

Nelson Penn

Eileen Price

Matthew Raj

Sterling Richmond

Abraham Riedel-Mishaan

Sara Saeed

Isis Shackelford

Rishi Talati

Sneha Thirkannad

Mukund Venkatakrisnan

Manting Xu



ATTENTION 8TH GRADERS

**Come to the duPont Manual 8th Grade OPEN HOUSE
and bring your family!**

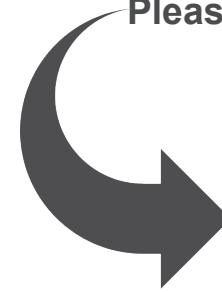
November 3, 2016

6:30 - 8:00pm.

California Pizza Kitchen Restuarant Fundraiser

Please support the MST magnet and enjoy dinner at California Pizza Kitchen at Oxmoor Mall on Nov 7, 4:30-9:00pm. A great night to visit with family and friends especially since there is no school the next day!

Please download and bring in this flyer.



Pizza with a purpose.

Bring in this flyer, present it to your server, and we'll donate **20%** of your check to the organization listed below. Purchases include dine in, take out, catering and all beverages.

**Oxmoor Mall
November 7th, 4:30 - 9:00 PM**



Join the **Pizza Dough™ Rewards program** on your next visit or at **cpk.com** and receive a **free** Small Plate for registering.

FUNdraiser offer valid only on the date(s) and at the CPK location identified on the flyer. Only 501c organizations and non-profit schools are eligible to participate in CPK's FUNdraiser program. CPK will donate twenty percent of food and beverage sales to the organization. Tax, gratuity, gift card and retail sales are excluded from the donation. Offer valid for dine in, take out, online, catering or curbside orders. Valid for delivery orders placed directly with CPK. Offer void if flyer is distributed in or near restaurant. For more information about the 501c organization participating in the FUNdraiser, please contact the organization directly.

