Δ Center Line Δ Clintondale Δ Cousino Δ Fitzgerald Δ Fraser Δ Lake Shore Δ Lakeview Δ New Haven Δ Romeo Δ South Lake Δ

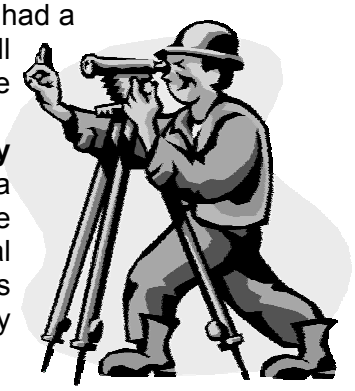
The CENTER PAGE

TRIGSTAR CONTEST

Once again this year, MMSTC students took part in the statewide TrigStar Contest sponsored by the National Society of Professional Surveyors and the Michigan affiliate. **Mr. Craig Amey**, from Anderson, Eckstein, and Westrick, Inc. in Shelby Township, visited the sophomores this spring to give a presentation about the contest and the profession of surveying. We really enjoyed some of his "from the field" stories, especially the one about getting too close to nesting bald eagles in Alaska! Sophomores prepared for the competition in **Mrs. Kincaid Dewey's** FST classes for a month prior to the contest on May 11th.

The purpose of the TrigStar program is to promote the study of trigonometry, to acquaint high school students with the use and practical application of trigonometry in the surveying profession and to build an awareness of surveying as a profession among mathematically-skilled high school students. State winners can earn cash prizes and proceed to the national level where top finishers earn college scholarships and other technological "goodies"! At the building level, the top finisher for MMSTC was sophomore **Brian Verkinderen** (Cousino). He had a score of 76 in 37:25 and will receive an engraved plaque for his accomplishment.

Sophomore **Emily Zumbrunnen** (Fraser) was a close second, with a score 76 in 39:55. The final problem on this year's contest was particularly tough!



BREAKING NEWS!

State results are in! **Brian Verkinderen** placed first in the state! He received a $1000 cash award! **Emily Zumbrunnen** placed second in the state! She received a $500 cash award! A presentation was held in late May. Afternoon sophomores, Brian & Emily's parents, Dr. Richardson (FHS Principal), Mr. Meengs (Cousino HS AP), Mrs. Hoven and Ms. Callahan were there to acknowledge their accomplishments!

IN THE CENTER PAGE…

Class of 2007 Senior Dinner

The Senior Class of 2007 celebrated their successes with their annual dinner. This year's dinner was held at the Sterling Inn Banquet Center on the evening of April 30th. Seniors **Lisa Kwiatkowski** and **Daniel Mack** served as Emcees for the evening's festivities.

Mrs. Lauran Hoven, Director of Special Programs gave the "Welcome" and everyone enjoyed the slide show presentation of the 59 students' four years of experiences and adventures. The slide show was put together over many, many hours by **Patricia Giacona-Wilson**. The teaching staff announced each senior as they stepped forward to hear their earned awards announced and to have the MMSTC medal placed on them.

Closing remarks of inspiration were delivered by **Mr. David Walsh**, Associate Superintendent for Instruction for the Warren Consolidated Schools. He spoke about courage, loyalty, and perseverance as skills learned while at the MMSTC and how these very skills will continue to build the leaders of the future. Mr. Walsh was one of the "founders" of the MMSTC and was its first Director. He was given a standing ovation from the appreciative audience.

10TH GRADE RESEARCH

Tenth Graders completed a research project. The research is a joint project between Interdisciplinary Studies (IDS) and Chemistry. Each student group is given an unknown pure element to identify. After reviewing the literature, students develop several experimental procedures to scientifically measure intrinsic properties of materials. With the use of electronic calipers and dial indicators students measured lengths to the nearest 0.01 mm, or less than one tenth the thickness of a human hair. Such precision was necessary in order to accurately calculate elemental properties such as density and thermal expansion. Students are also challenged by the construction of homemade calorimeters, used to measure specific heat, or the amount of heat a given material can hold. The value measured for specific heat was used to further confirm the identity of the unknown "mystery" element. If the experimental results were inconclusive, students had the option to perform other tests. Students are presenting their research at the end of May. Shown below is **Steven Mazur**, **Donna Chan**, and **Kristina Knirk** conducting their research.

Continued…

WORKING SOLIDLY

Students in the 11th grade IDS class used Solid Works to invent new and useful products during their first semester. Each student created a unique and innovative product of their choice with the use of Solid Works, a 3D computer-aided design package used at MMSTC. The designs were generated in plastic by a special machine sold by Stratasys, Inc., that prints, in plastic, a complete three dimensional part.

This year, two MMSTC students won prizes at the Michigan Industrial and Technological Society (MITES) State Competition held in Battle Creek, Michigan, May 23 – 26 of 2007. **Michael Polselli** and **Dillon Raxter** took second and first place respectively, in the "Inventions" category.

Dillon Raxter's invention advanced on to a second round of judging and was selected as State Grand Divisional Award winner in Applied Technology. Shown below are Dillon Raxter (left) who invented a Golf Ball Holder which is designed to fit onto a belt and Michael Polselli (right) who invented an iPod holder designed to fit within an automotive cup holder.

FROSHY RESEARCH

The students, I.D.S., Math, and Science departments are happy to report the freshman research is complete. The student presentations were held on Thursday May 17th with the greatest care given to detail. Student groups of two were required to professionally produce a presentation which communicated the findings of their semester-long research project.

This year the ninth grade biology topics range from perfecting the isolation of DNA from strawberry plants to testing how temperature variations influence cricket mating calls. Many of the students selected plants as their main topic of research due to ease as a testing subject. All of the research was sure to inspire some new scientific discovery. This year as a new twist the staff required the students to find commercial application for the research work that they completed.

Students also prepared their first formal scientific research paper and presentation in I.D.S. Once again **Ms. Gerling** did an excellent job of preparing the students for this task as well as the rigorous question and answer session that followed their presentations.

MATH ESSAY?

Whenever an English teacher announces an essay, the class inevitably groans. When a Math teacher assigns an essay, a small-scale riot follows. That's basically what occurred each of the four times my math teacher assigned us an essay.

Following the essays, we had to give an oral presentation to two people who both knew the topic. I had a chance to demonstrate the knowledge I cemented to memory.

While I wrote the essays, I could only imagine our teachers had found a new way to punish us. The essays required a good amount of research and effort. However, weeks after, when I had to answer a question about solids of revolution (a topic we wrote about) on the AP test, I was able to easily answer the question.

Before writing the essays, I could do the many problems, but I never understood the complexities of calculus. I found that understanding the principal behind the problems was extremely helpful. I didn't have to rote-memorize formulas for area and volume because I could easily derive them. Overall, writing essays for a math class benefited me by forcing me to learn the principals behind the questions. **Lisa Kwiatkowski**

SOPHOMORES VISIT MSU

The sophomore class had a unique opportunity to participate in Design Day, presented by the College of Engineering at Michigan State University. Students started their day with a preview of student humanitarian research projects which included the design and building of a bike for a boy with spina bifida, a solar oven for the people of Tanzania, and a control system for a robotic arm to be used in space exploration.

Next they had to build a bridge strictly using drinking straws and stick pins and to reflect a laser off of their mirror and direct it through a maze. The students participated in a panel discussion with MSU engineering students to learn about the engineering program and life on campus. Next was a trip to the National Superconducting Cyclotron Laboratory. This is the nation's leading particle acceleration facility. After all of their hard work they went to the MSU Dairy Store for a cool treat and a visit with MMSTC alumni now studying at MSU. A walk through campus and a quick game of Guts Frisbee completed their trip.

STATISTICS POSTER PROJECT

Tenth grade MMSTC students were once again recognized for doing outstanding work on their statistics poster project. Tuesday, May 22, visitors from the ASA came to present awards to many students. The ASA, American Statistical Association is the nation's leading professional association for statistics and statisticians; it is a scientific and educational society dedicated to promoting excellence in the application of statistical science.

Continued…

Representatives from the ASA included: **Dr. Robert Kushler**, professor of statistics at Oakland University, **Dr. Carrie Roberts**, statistician and engineer at Ford Motor Company, **Dr. Kathy Peterson** from Macomb Intermediate School District, and **Dr. Al Schulte** from Oakland Schools. They presented **Heather O'Connor** and **Brenda Bahnweg** with 2nd Place certificates, checks, and a plaque engraved with their names to hang in the school for their poster titled "Female vs. Male French Grades." **Ylli Qoshi** and **Ryan Rivard** received the same for their poster titled "The Nuclear Threat" which took 3rd Place.

HONORABLE MENTIONS

George Ajine-Basil & **Anthony Farah** -- The Sound of Movies
Tamim Shaker & **Kevin Liening** -- Is Homework Hazardous to Your Health?
Heather Jagoda & **Emily Zumbrunnen** -- Stop and Remember
Paulina Starostka & **Michael Jarrett** -- Sleep Much?
Kaitlyn Beels & **Arianna Moss** -- Do You Know Your H_2O?

Congratulations to all of you!

THANK YOU!!!☺

OVER $125 RAISED FOR BREAST CANCER RESEARCH FROM COLLECTING BOTTLES IN MRS. COPELAND'S ROOM !!!!!!

MMSTC SHIRT SALE

A big thank you goes out to **Joanna Slisinger**, junior, for organizing a MMSTC t-shirt and fleece jacket sale! The grey fleece jackets have the MMSTC logo embroidered on the front. There were two t-shirt designs: a bright green shirt with "I ♥MMSTC" on the front and "I adore my TI-84" on the back and a bright blue shirt with MMSTC on the front the top 10 "you know you go to MMSTC when..." on the back. From designing and finding a vendor to taking orders and delivering, Joanna and her crew went above and beyond!

COUNSELING OFFICE NOTES

Class of 2008 All advanced science research partners are picked prior to the end of this school year. Students will have had an opportunity to meet with their advanced science instructor to discuss next year's curriculum and expectations. Summer reading lists will be available. We encourage all students to get a jump start this summer and begin working on their research projects with their partners.

Many universities will offer their on-line applications on August 1st. It is highly recommended that students apply as early as possible to their college/colleges of choice. It is also recommended that students work on their essays, gathering letters of recommendation and applying for scholarships over the summer.

Class of 2009 can start preparing over the summer to take the PSAT/NMSQT when returning in the fall. The PSAT is the qualifying test for entry to National Merit Scholarship Corporation competitions for college scholarships that will be awarded in 2008. Students who meet published participation requirements, which include taking the PSAT/NMSQ in their junior year will enter the competition for recognition and award. Further information can be found at **www.nationalmerit.org** and in the 2007-2008 PSAT/NMSQT Student Bulletin that will be given out in the fall.

Class of 2010 students should be reviewing their course selection plan for the next three years. Summer school may be an option so that you can make room in your schedule for one of your elective classes. Students should think about taking the PLAN test when they return in the fall. This test is a powerful predictor of performance on the ACT Assessment and necessary if the student plans to dual enroll. Remember practice makes perfect!

Your counselor, **Mrs. Brown** is available to help you with any of your academic, college, and/or personal concerns at any time. E-mail her at **ebrown@wcs.k12.mi.us** or call her at 586-698-4399. Have a safe and productive summer!

COLLEGE CHOICE GUIDE

Making the final decision, or just starting your college search? Here are some tips to consider!

Go to your local library. You can find college books and college guides that offer detailed school profiles, programs offered, tuition costs, campus culture and more.

Visit the universities' Web sites. This will allow you to learn more about the school's location, size, admission, and financial aid information.

Call the school's alumni association. Schedule an interview with an alumnus of the school who can offer advice and share his/her collegiate experience, including activities in which you may be interested in participating.

Consult your counselor. The guidance office can assist you with information on college preparation, career options and making your final school decision.

Surf the internet. Internet sites such as **www.fastweb.com** provide a free college search. You can also find college blogs online to give you an inside look at campus life and activities.

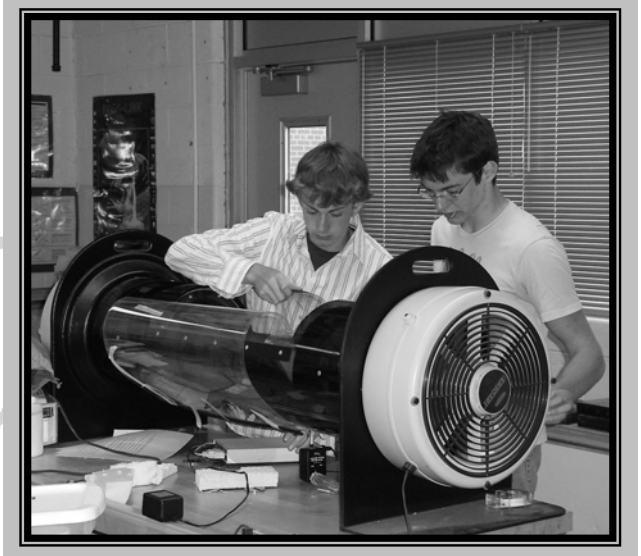
TOWER PROJECT

Ninth graders have completed their culminating geometry project which encompasses the work they have done all year. The geometry and trigonometry of figures is necessary to design a tower for a multimillionaire who loves shapes.☺ Look for the "Village at MMSTC"!

PHYSICS RESEARCH

It's that time of the year again when the temperature outside rises and so do anxiety levels of the junior students here at MMSTC as they feverishly work on collecting and analyzing the data from their physics research. Topics span the whole range of concepts covered in **Mr. Mcmillan's** physics class this year, from building trebuchets and studying projectile motion, to testing what factors affect the electromagnetic strength of a coil gun. Pictured is **Spencer Crabb** (left) and **Ben Fischer** (right), both from Lakeview High School; they are using the wind tunnel to study how the design of an airfoil affects its lift. They used *Solid Works* CAD software to design their airfoil then used the *Versalaser* printer to cut their profiles and create the airfoils. Ben said that they found that "the standard symmetrical airfoil shape commonly used, is not the most efficient" their experiment showed the tapered design to have maximum lift.

Also pictured is **Justin Vail**, he and his partner **Mike Newton** tested to see if buying those expensive tennis shoes is really worth the extra money. They used a spring scale to measure the force needed to set each shoe type in motion along different surfaces. They said their data showed that the more expensive shoe did have a higher coefficient of friction. Sorry Moms, those expensive shoes really will give your son/daughter better traction, keep buying them!



MMSTC AT CEDAR POINT

Tuesday May 15, the Juniors and Seniors of MMSTC attended a fieldtrip to Cedar Point Amusement Park in Ohio. Although the bus ride was interrupted by a brief mechanical problem, the weather was near perfect with blue skies and temperatures in the 80's.

The weather reports called for rain which helped keep the crowds away. Lines were short for all rides. Rides such as Top Thrill Dragster, which normally have waits as long as 6 hours, had lines no longer than 1 hour. Unfortunately, the "Maverick" roller coaster was not yet open so students will have to wait until next year to do any official research concerning the rumored "excessive g-forces" of the new ride.

While at the Park, Physics students made observations and calculations such as determining the acceleration of the Millennium Force Roller Coaster, the G-Forces on the Top Thrill Dragster and power of the Power Tower.

The projects were turned in around 2:00 so the students had the rest of the day to enjoy. At 6:00 pm the students were back on the bus and ready to return home.

AD PHYSICS
Seniors Race Electric Cars

Earlier this spring **Mr. Supal's** Senior IDS class was broken up into two teams: AM and PM seniors. Each team was given a transmission and drive system from an electric wheelchair or golf cart. They then had to design and build a vehicle complete with structure, steering, braking and electrical system. The student teams had to determine what materials were needed.

The AM seniors led by **Mike Fetter** used an old bicycles front end and brakes to build a three wheeled lounge chair complete with flashing siren and deck for an ice-cream cooler.

The PM seniors led by **Billy Jones** and **Jeff Hill** used old robot parts and wood to build a four wheeled wagon with a simple Flintstone type braking system and I-pod Sound system.

On April 18th the teams moved from the Tech Lab to the back parking lot to race the cars in three events: A Drag Race, Dual Slalom and a Le Mans style Endurance event. The AM team won both the Drag race and Endurance event. The PM team was leading the Dual Slalom until the driver drove off course , disqualifying the team, making it a clean sweep for the AM Seniors. Congratulations to all who participated in starting a new MMSTC tradition.

Warren Consolidated Schools

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Dr. James Clor, Superintendent
David Walsh, Associate Superintendent, Of Instruction

Δ

Macomb Math Science Tech Center
Lauran Hoven
Director of Special Programs
MMSTC Newsletter Committee: A collaboration of MMSTC parents and staff
Printing and Mailing: Secretarial Staff

Δ

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MMSTC MISSION STATEMENT

The mission of the Macomb Mathematics Science Technology Center, in partnership with families and community, is to create the best innovative environment which fosters excellence and vision in teaching, learning, and discovering the relationships of mathematics, science, technology, and society.

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