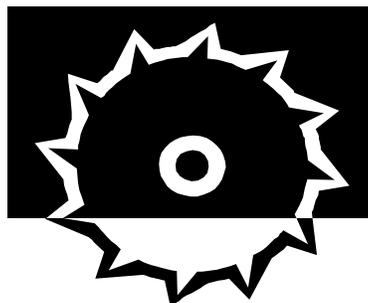


DMAPT Today

DMAPT 2008-2009 Meetings



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*Minutes by Stephanie Spencer,
DeLaSalle High School*

*Newsletter by Nicole Murawski,
Royal Oak High School*

DMAPT September 16th, 2008 – Royal Oak High School (Host: Nicole Murawski)

We started off our first meeting of the fall in the normal fashion...socializing and catching up. After introductions, the group talked about upcoming events: MDSTA is October 18, we plan to have our 50th anniversary party in early November—our host will be Wayne State University. We plan on making it a family event on a Friday evening with a planetarium show, demos and several make-and-takes. MSTA will be March 5th-7th and MIAAPT will be March 28. Also, the national AAPT conference is coming to Ann Arbor this summer. We are looking to get involved.

Steve Dickie (Divine Child High School) has designed our new website (www.dmapt.org). Please contact Steve if you want to add anything to the site.

Special Points of Interest:

- DMAPT 50th Anniversary!
- DMAPT Meeting Streamed Live
- PTRS Workshops in Southern Michigan
- AAPT Coming to Ann Arbor



Don Pata (Grosse Pointe North High School) reminded us all that some really big things were happening at CERN. Check out the CERN website to stay current on the happenings. Wayne State University may do a presentation at one of our future meetings. In October, Mark Davids' (Grosse Pointe South) and Don Pata's students will present their remote control cars to about 8000 engineers. The students have been using these cars to investigate the future of GPS—cars that don't crash.

After sharing, we elected our new officers. Our new secretary is Stephanie Spencer (DeLaSalle Collegiate High School). Steve Dickie (Divine Child High School) has become our new webmaster. Our volunteer photographers are Chris Deyo (Rochester Adams High School), Beth Kubitskey (Eastern Michigan University), and Catherine Jasionowicz.

The theme for this meeting was cool new demos to share. Don Pata (Grosse Pointe North High School) started us off with some of his discrepant events demos. Don does this as a way to get the students involved and thinking. This evening, he had a projectile launcher set up aimed at a troll. He launched the projectile and hits the troll. He then changed the launcher to a steeper angle and asked us to vote on the outcome. "Will it hit the troll, in front of it or behind it?" After we voted, he launched the projectile again and it hit the troll. We then learned that the two angles at which he launched the projectile were complementary. His next demo involved a track and a ballistics cart. The ballistics cart launched a ball straight up in the air when triggered. Don asked us to vote again for where we thought the ball would land if the cart were rolling on the track while the trigger was engaged. After our vote, he conducted the demonstration and the ball landed in the cart. He proceeded to conduct similar demos while the track was at an angle and the cart was rolling up, and then again when it was rolling down.

Steve Dickie (Divine Child High School) introduced us to Phun (www.phunland.com), which is an interactive website using physics principles. To see what's so much "phun," log on to the website and watch the Youtube video for a demonstration of Phun. It's worth it!

Jim Gell (Plymouth High School) showed us a hand-held gyro exercise ball (Dynaflex is one brand). The more the ball spins, the more resistance it provides. This can be a great demo when introducing the physics principles behind gyroscopes.

Mark Davids (Grosse Pointe North High school) showed how you could turn simple materials such as a balloon and a quarter into a very meaningful and engaging circular motion demonstration. Mark blew up the balloon and pushed the quarter inside. Hot the quarter spinning and pointed out that, while it was spinning, it didn't fall. He asked us to explain why.

Chris Deyo (Rochester Adams) shared with us Make Magazine. This magazine has published instructions about how to make a bike-pump rocket and a laser harp (just to name a few). This magazine offers a subscription for those who are interested. Chris also shared a lab practicum that she does with her AP classes. The class has to solve the practicum together. Chris chooses a couple students to explain the solution, so the entire class must understand it in advance. They all receive the same grade. For the particular practicum she brought to DMAPT, she sets up a long track at an angle on top of a table. A fan cart is on the ground and is set to move toward the table. The students have to solve for the distance a marble would travel after rolling off the ramp, and set up the system so that the marble would land in the moving fan cart.

DMAPT 50th Anniversary Party – November 14, 2008 – Wayne State University (Host: Jeff Conn)

To celebrate our 50th birthday, DMAPT held a celebration at Wayne State University. Spouses, children and grandchildren joined us for the evening. Our president, Jim Gell welcomed everyone to the event. Mark Davids gave a brief history of DMAPT. From its initial start as the Tri-County PSSC Teacher's Group, DMAPT has grown to one of the top affiliates within AAPT. He noted that Al Gibson is the High School chair of AAPT and Paul Zitzewitz is the AAPT treasurer. He also acknowledged the support of our university partners Oakland University, Wayne State University, Eastern Michigan University, University of Michigan - Dearborn and the University of Michigan as well as our corporate partner, Arbor Scientific. Members of the early DMAPT organization included Alvin Saperstein, Al Varone, Cal Hoeksema, and Al Gibson. They recalled that Al Saperstein had given a lecture on global warming at an early meeting. Cal told of how the early PSSC sharing led to added ways for the teachers to make things real to the students as well as ways of helping them to visualize concepts. Al noted that numerous DMAPT members have earned awards in part due to the support and help from their DMAPT colleagues. Laura Ritter read a note from Bob Williamson. All enjoyed a slide show created by Don Pata of various DMAPT events over the years.



After enjoying a dinner provided by the Wayne State Culinary School, members and their families were treated to several exciting demonstrations. Clarence (last name?) set up a geyser in the hallway. Walt Kauppila created a fire tornado that illustrated the principles of convection as well as conservation of angular momentum. A cylindrical plastic shield constructed of 2 C-shaped pieces that overlapped (with a gap of about an inch) was placed around a saucer containing a mixture of ethanol and rubbing alcohol. The saucer was lit and a lid with a chimney was placed over the top. Air entered through the gaps in the shield with a sense of rotation. As it moved toward the center, it sped up. Soon the flames began to rotate to the delight of the audience. Walt also showed the attendees how to produce a cloud in a 2-liter bottle. He dropped a lit match into the bottle which was half full of water. He then put the cap on the bottle and began to swirl the water to increase the humidity of the air above the water. By alternately squeezing and releasing the bottle, a cloud could be seen to form and disappear as the temperature changed.



Next, Mike McIntyre's students put their robot through its paces. "The Juggernauts" student team had constructed the robot as part of the Oakland County Competitive Robotics Club. Members enjoyed seeing the robot pick up and throw a football as the students described the physics of their design.

Chris Deyo demonstrated a paper rocket launcher constructed by her husband, Mike. Chris pointed out that the rocket must fit tightly to assure a good launch. The rockets easily launched, with the second one wedging into the projector casing!

Don Pata led the audience through a series of discrepant events. To make it easy for us, he made it multiple choice! Using a troll as a target, he launched the cannon for a "bulls-eye". He then varied the launch angle and asked the audience if the marble would fall in front of the troll, behind the troll, or somehow, still hit the troll. Don also demonstrated how a spinning bicycle wheel could be supported by a single handle on one side.



Mark Davids was the next presenter. One of the young attendees, Kathleen, assisted Mark by successfully pulling the table cloth out from under the place settings. Tyler showed his courage in sitting a bed of nails. Jaspas showed his strength in winning the tug-of-war against Al Gibson who was on the wheeled cart. Finally, Mark's many young assistants handed out diffraction glasses. The audience was treated to a light spectrum show from a light bulb and camera flashes.

