Manufacturing Technology
Annual Advisory Committee Meeting Agenda
November 13, 2007, Los Altos High School

6:15-6:45PM tour of facilities- Students from the class explain current projects

1. Meeting called to order: 6:47 PM

2. Introduction
    a. Meeting Chairman Nomination: Laurie Marshall

    b. Introduction of Members in Attendance:

        i. Robert Franz – La Puente Valley ROP teacher
        ii. Ed Richter – La Puente Valley ROP teacher
        iii. Suk Chong – LADPW
        iv. Rudy Ybarra – Booster Club Parent
        v. Kenji Mayeda – Health HAZMAT
        vi. Paul McClure – Pomona USD
        vii. David Vedder – La Puente Valley ROP
        viii. Brett Gaviglio – Vertical Systems - Alumni
        ix. Nikki Kodama – Northrop Grumman - Alumni
        x. Stanley Chu- North Mary Capital - Alumni
        xi. Mitch Kodama – Retired Engineer
        xii. Laurie Marshall- Haddick's Auto Body and Towing
        xiii. Richard Cheng – Universal Space Lines - Alumni

3. Review of Previous Year's Minutes:
    a. Approval of minutes: VOTE: Motioned to approve by Crystal Lopez.
        i. Minutes approved unanimously

4. Current Projects and Updates:
    a. *Build Your Dream Vehicle Competition*:
        i. BYDV has no sponsors so no competition took place the past year
            1. Maybe the $63,000 AQMD was supposed to give to ISAAQ challenge can be used for the new BYDV with clean air as the guidelines
            2. Ford Motor Company might be a potential sponsor
        ii. PR students are working on reviving the program
            1. PR is currently contacting Chrysler
        iii. BYDV is a good recruiter of girls and freshmen
    b. *Solar Cup [Solar Boat]* :
        i. Placed 7 out of 41 entries
        ii. Plans to participate in the 2008 Solar Cup, utilizing E-tek or Lynch motors.
        iii. Team Advisor: Ed Richter
            1. Statistics:
                a. 5th Sprint Race
                b. 6th Endurance Race

iv. Plans for this year
    1. Build their own solar panels
    2. Building a more stable boat in terms of weight distribution
        a. More weight in front by shifting cockpit up or reduce weight in the back

c. *Botball*:
    i. Regionals:
        1. 5th Place
    ii. Team Structure:
        1. Builders
            a. Build robots to complete certain tasks
        2. Programmers
            a. Program robots to accomplish certain tasks
    iii. Team planning on competing in Botball this year and winning
        1. The current team is planning on winning the regional competition and has a good chance.
            a. If the team wins regions, they will go onto the national competition held in Oklahoma
        2. Botball is still currently forming the teams
        3. It is an entry level project and is a good recruitment

d. *Middle School Robotics*:
    i. 2007 Competition
        1. Sponsorship moved from HLPUSD to LPVROP
        2. Competition site moved to Industry Hills Expo Center
        3. Include students from three school districts: Bassett, Hacienda La Puente, & Rowland
        4. Larger competition, around 30 teams, good turnout
        5. Lego Robots
    ii. 2008 Competition
        1. Continue competition at Industry Hills Expo Center
            a. David Vedder will get the date for the competition
        2. Planning on having more schools
            a. Each table building kit will only cost the school $50
    iii. Suggestions: More training for new children

e. *Infusion:*
    i. Damaged by Shell Group and is currently being repaired by students
        1. Repair suspension, chassis, etc
        2. Shell Group wanted to have Infusion to present to senior partners but did not load the vehicle back in correctly and damaged the car
    ii. Presentation on Fuel Cell by Abraham Lin
        1. Ballard at first did not want LAAE to have the fuel cell
        2. How much heat is given off and how much water is produced?
            a. 0.87 L/hr @ full power but we do not run the fuel cell on full power
            b. Not much heat is given off since the fuel cell cools itself off
        3. Infusion has helped many students with their futures
            a. Chris Liu, Ann Chong, Aaron Norris, Curtis Wong, etc.

f. *DARPA Urban Challenge*
    i. LAAE not competing in 2007 DARPA Urban Challenge
        1. The project was more complex than we had anticipated and the team did not get to qualify for the race
        2. 3 teams completed the 2007 DARPA Urban Challenge
        3. 84 or so teams registered for the race but only 14 got in
        4. Carnegie Mellon, Stanford, and MIT placed in the top third
        5. AC Propulsion proposed to give us an electric Scion xB last year, but ultimately, no car was received
    ii. Students are still building and working on the test vehicle
        1. Software is currently being written by Ted Wang
        2. The goal is to have the car moving autonomously by June
    iii. Team planning on entering in the 2008 DARPA Urban Challenge
        1. The competition has been ongoing for 3 years starting out with the Desert Challenge to the Urban Challenge
        2. Alumni are currently coming in to work on the project
            a. Richard Cheng is a main player in the project
                i. He is currently working for Universal Space Lines and is working with NASA at the moment
    iv. $10,000 was donated by Southern California Edison over summer
    v. PR needs to fundraise for the project
    vi. Scion xB may be a possibility through Scion's Steve Hapanaka
        1. Steve Hapanaka is going to donate to LAAE a Scion
        2. Contact with Hapanaka started 4 months ago and finally decisions have been drafted 2 weeks ago
        3. A wise plan would be to invite Hapanaka to the show and maybe Toyota can help out with the program
    vii. Motion to approve to continue the program: Brett Gaviglio, second by David Vedder, approved unanimously

g. *Shell Eco- Marathon*
    i. Planning on entering 2 vehicles
        1. Combustible engine with High Voltage
            a. 100 lbs
            b. Body is already made
            c. Mike Keirn's vision
        2. New and improved Hydrogen Fuel Cell Vehicle
            a. 300w, lighter, more efficient
        3. Can we build the two cars in time?
            a. Hopefully and yes
    ii. fundraising

5. Safety Issues:
    a. Equipment Status:
        i. Mechanical: air compressor works, new welding masks, new CNC Mill
        ii. Electrical: New fuel cell, new solar cells
        iii. Composites:

b. Drill press is free standing (near the entrance to downstairs) and should be mounted down to the ground in case it tips over
c. Yellow safety caution paint should be repainted
d. Hydrogen fuel cell riveters are not strapped down and need to be strapped down tightly
e. Small cylinder needs to be strapped down
f. Composites oven – where would it be located?
    i. The exhaust and ventilation would be a problem
        1. The plan is to have a new building dedicated to Composites
g. How are used acetone and oily rags disposed of?
    i. Acetone rags are put in containers and taken to Cerritos College to be disposed
    ii. Oily rags are not mixed with acetone rags and are not harmful
h. New equipment – CNC Mill – funded by the state but do not have it yet
    i. Space is limited
    ii. The lubricant and oils need to be properly taken care of
    iii. On 12/3/2007 Prop 1D next cycle starts
        1. CA has $1 million to build new building – hopefully for composites

6. Manufacturing Technology Program Review
    a. LAAE is a very unique program and is one of a kind
    b. LAAE is hard to identify under job description
        i. Alumni have gone on into the entertainment, engineering, journalism etc industries.
    c. The major skill learned for students is responsibility and leadership
    d. Shell Eco Marathon- Ann Chong spent a lot of time making things work out
    e. Motion to accept the program guidelines with enhancements:
        i. Motioned to approved by : David Vedder
        ii. Seconded by Suk Chong
        iii. Approved unanimously

7. Project Proposals and Concerning Issues and Ideas
    a. Bridge Building Competition hosted by UCI
        i. Students have to use popsicle sticks and glue to build a bridge
        ii. Report and verbal presentation are required
        iii. Currently students tested different types of glues and popsicle sticks
        iv. Student have to test the weight and efficiency
        v. 50% of the popsicle sticks can be glued
        vi. Competition takes place in March 2008
            1. There are 2 teams with 3 freshmen in each

    b. Solar Boat
        i. How and where are points earned?
            1. Points are acquired along the way through going to workshops, turning in reports on time, and the actual race itself
            2. Are students really building the boat from other schools?
                a. There should be a test to see how well the students know the boat

b. Parents and professionals are building the boats instead of students

c. BYDV
    i. Nikki Kodama provided PR team with 3 contacts last year
        1. Letters were sent to the contacts but no response was given
        2. Nikki might have some new and better contacts
        3. It takes a while for corporations to respond since it took Mitibushi years to produce a car
    ii. BYDV had a great impact on the kids
    iii. When are the packets to revive the competition going to be sent?
        1. The packet is in its final stages and only needs to have the finishing touches made to it.
        2. Interviews might be a better idea, maybe lunch with an exec.
            a. Start with Nissan or some other company and keep on bugging them
            b. If you go to Toyota, lay down how everything works such as timeline, process
                i. Simply let them take over and provide them with everything they need to make it work and not make them start the competition
                ii. What is their benefit for helping us?
                iii. Toyota is a good company to go to because their only requirement for sponsorship is that it is educational

8. Closing Statements

9. Vote to Continuation of Project

    a. Motioned to continue the program by Brett Gaviglio, second by David Vedder, approved unanimously.

10. Meeting Adjournment
    a. Meeting adjourned at 8:15PM