

Northrop Grumman Corporation (NGC) & Vista Magnet Middle School (VMMS)

“A Partnership for Growing Local Engineers”

Presented by:

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NGC & VMMS Activities in Partnership for Engineering

-Northrop Grumman Involvement-

- **Support Multiple Engineering-Related Activities**
 - Support National Engineering Week (Feb. 2008)
 - Sally Ride Toy Contest
 - Engineering Club (Friday Afternoons – NGC Volunteers)
 - Provide Classroom Speakers
 - Help Establish Test and Evaluation Lab
- **Grow Engineers Locally**
 - VMMS is a Title 1 School (>40% free/reduced cost lunches);
 - Current enrollment is 200 diverse students who LIKE science and engineering
 - School will grow to 600 students over the next few years
 - Mentor these students to prepare them for new Magnet Math and Science High School (and College)
 - Provide students with opportunities to understand what an engineer does and why it can be fun

NGC & VMMS Activities in Partnership for Engineering -National Engineering Week-

- **Engineers Week is February 17-23, 2008**
- **National Engineers Week Foundation**
 - Website www.eweek.org
 - Slogan “Engineers make a world of difference”
 - Provides guidelines and materials for Engineering Week Activities
- **VMMS**
 - Enthusiastic Teachers: Can host multiple activities
 - Participates in National Engineering Event
- **NGC**
 - Provides volunteers for multiple activities
 - Cyberchase Kits provided by NGC
 - WINGS could support several special activities with “Introduce a Girl to Engineering Day” and “Extraordinary women Engineers Project”
 - Already have informal list of volunteers from UCAS-D and Global Hawk, will be able to recruit other volunteers.

NGC & VMMS Activities in Partnership for Engineering

-Sally Ride Toy Contest-

- **Sally Ride Toy Challenge is a year long process**
 - <http://www.sallyridescience.com/toychallenge/>
 - Registration Deadline 12/12/2007
 - Round 1 Judging 02/01/2008 - 02/07/2008 in Balboa Park
 - Students design a new toy using engineering principles and rules
- **VMMS**
 - Provide Teams of Students (3-6 members)
 - At least ½ the students must be girls
 - Have several Honor's and IB students from Vista High School who are interested in coaching VMMS toy challenge teams
- **NGC**
 - Provides Volunteer Engineers to mentor High School Students as Coaches
 - Provides funding for registration and toy design
 - Max expenses are \$195 per team
 - Limit includes any donated supplies
 - A single volunteer can support multiple teams
 - Already have list of potential volunteers from WINGs

NGC & VMMS Activities in Partnership for Engineering

-Engineering Club-

- **Weekly Club Held After School on Friday Afternoons**
 - Would support multiple activities
 - Robotics and Toy Development
 - Aviation and Flying
 - Lab Activities
 - Other Engineering type Activities
 - Would have 1 theme per week
- **VMMS**
 - Will open club to all students in school on Friday Afternoons
 - Provides Facilities and Teacher Support
- **NGC**
 - Will have roster of volunteers for every Friday
 - Volunteers will commit to 1 Friday Afternoon per Month
 - Provides lab equipment from NGC surplus
 - May provide some funds for supporting activities

NGC & VMMS Activities in Partnership for Engineering

-Toy and Robot Test and Evaluation Lab-

- **VMMS Has Facilities for an Extraordinary Lab**
 - Site was the original High School for Vista Unified (Built in 1930's)
 - Has a Weld Shop, Woodworking Shop, and large lab space filled with old machinery
- **Goal is to turn these facilities into a “Toy and Robot Engineering Development Lab” (Need a catchy name here)**
- **VMMS**
 - Provides Facilities
 - Provides Students, Teachers, and Parents who support the Lab
- **NGC**
 - Provides volunteers
 - Provides lab equipment from NGC surplus
 - May provide some funds for supporting activities
 - Already have “lab rats” from NGC very interested in volunteering

NGC & VMMS Activities in Partnership for Engineering

-Long Term Vision-

- Provide support to VUSD to develop a comprehensive Engineering program from Middle School to High School
- Allows NGC to grow engineers from local kids
- VUSD is ethnically and economically diverse
- Reaching a broad population of students that normally don't have access to engineering opportunities
- Allows NGC employees to have fun and play with engineering ideas while volunteering.
- Recruitment tool for the NGC HIP program and college internships.
- Possible College Scholarships for Engineering Majors