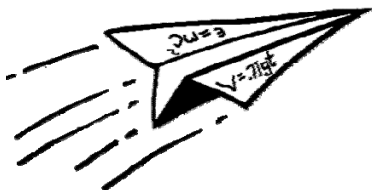




2006 Nano Quest Challenge Kickoff

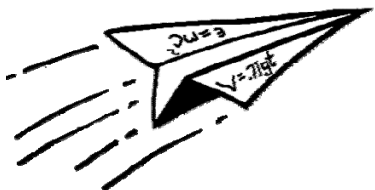
9/15/2006





Tonight's Schedule

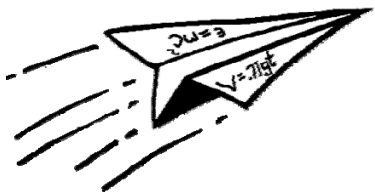
- Introductions
- Nano Quest Project
- Nano Quest Game Video & Overview
- Significant Rule Changes for 2006
- Questions and Answers





A Note Before We Start

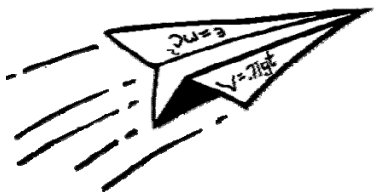
- Video will be posted on Google Video
- Presentation will be posted at:
 - ▶ www.ncafll.org/2006/kickoff_slides.pdf





Introductions

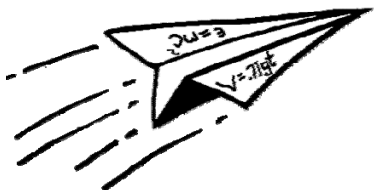
- Playing At Learning
- Our Google Hosts
- T-Shirt Design Contest
- NCaFLL Awards





Playing At Learning

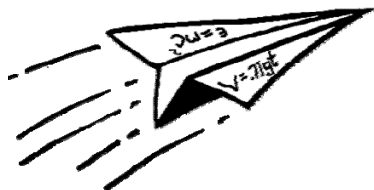
- N. CA Partner for 3 FIRST Programs
 - ▶ FIRST LEGO League
 - ▶ FIRST Vex Challenge
 - ▶ Jr. FIRST LEGO League
- 501(c)(3) Non-Profit
 - ▶ Donations are tax deductible (hint, hint ...)
 - ▶ All Volunteer
 - ▶ Community Based





Our Google Hosts

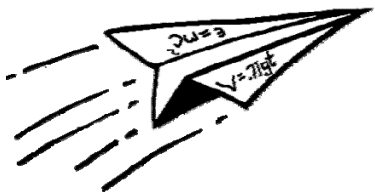
- Albert Bodenhamer
- Glenn Trewitt
- Emily Nishi
- Amber Issa





T-Shirt Design Contest

- Submit designs to Playing At Learning
 - ▶ tshirts@playingatlearning.org
 - ▶ Deadline Oct. 2nd
- Designs posted at www.ncafll.org
- Vote by NCaFLL Community
- FREE t-shirts for your team & coaches
- T-Shirts sold to support tournaments

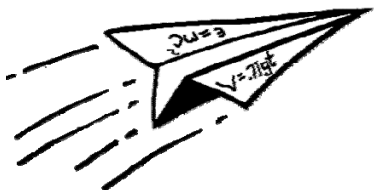




NCaFLL Awards



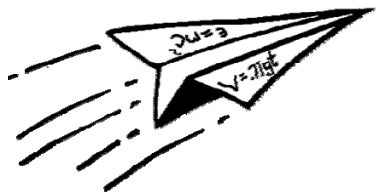
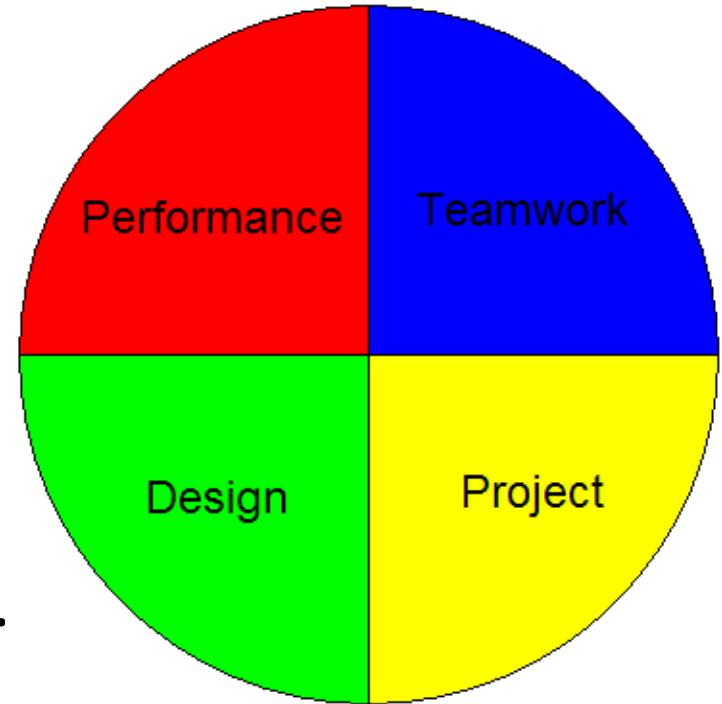
- Similar to last year
- For award details, see:
 - ▶ Coaches' Handbook (standard awards)
 - ▶ www.ncafll.org (N. CA awards)
- Need nominations for:
 - ▶ Coach/Mentor
 - ▶ Outreach
 - ▶ Outstanding Volunteer





Remember!

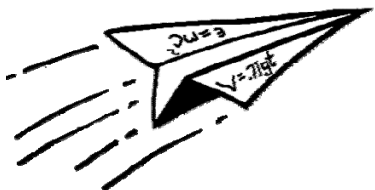
- FIRST Values
 - ▶ 25% robot performance
 - ▶ 25% robot design
 - ▶ 25% teamwork
 - ▶ 25% research project
- ALL parts are important





Nano Quest Project

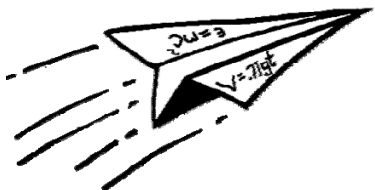
- Explore
 - ▶ Explore nanotechnology applications
 - ▶ Learn about difficulties
- Design
 - ▶ Solution to problems
 - ▶ Improved application
- Share
 - ▶ Share your project with others





Nano Quest Project Resources

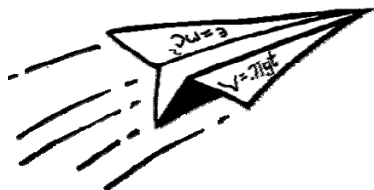
- Training DVD
- Kickoff videos
 - ▶ <http://fll.ee.nd.edu>
- Nano Quest Project Resource Page
 - ▶ See www.firstlegoleague.org under the Resources section of Challenge 2006





Nano Quest Missions Video

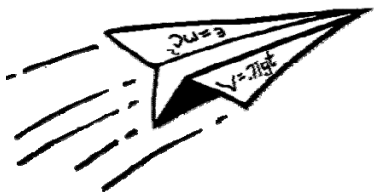
- Explains each mission
- This & other Nano Quest Videos available at <http://fll.ee.nd.edu>



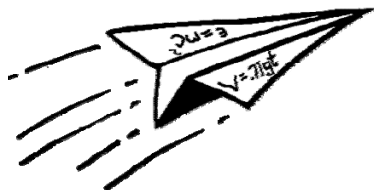


The Nano Quest Game

- Individual Atom Manipulation
- Smell
- Stain Resistant Fabric
- Atom Force Microscopy
- Self-Assembly
- Smart Medicine
- Nanotube Strength
- Molecular Motor
- Space Elevator
- Fairness Bonus



Nano Quest Table

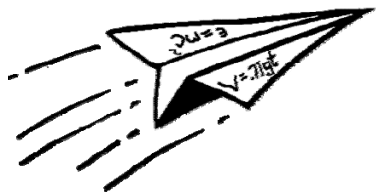
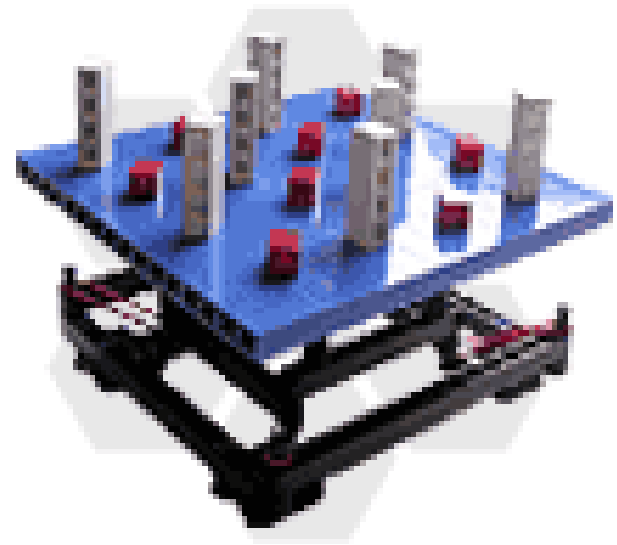




Individual Atom Manipulation

max: 40 pts

- 8 red and 7 or 6 white atoms on table
 - ▶ 30 points
- 8 red and 5 or fewer white atoms on table
 - ▶ 40 points
- Less than 8 atoms on table
 - ▶ 0 points





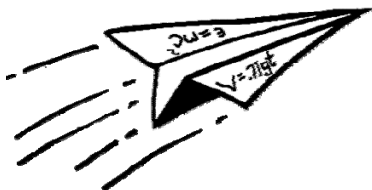
Smell

max: 30 pts

- Red Molecules off paper plate
 - ▶ 5 points each
- Molecules transferred to neck
 - ▶ 10 additional points each



16

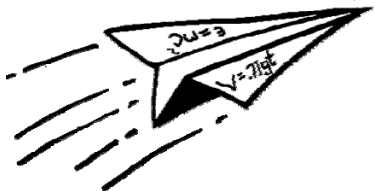




Stain Resistant Fabric

max: 70 pts

- Dirt Trap at Mark
 - ▶ 15 points
- Dumper Empty
 - ▶ 15 points
- Dirt in Trap
 - ▶ 5 points each
- Dirt anywhere else on table
 - ▶ 3 points each (BONUS Object)

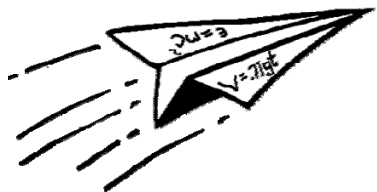
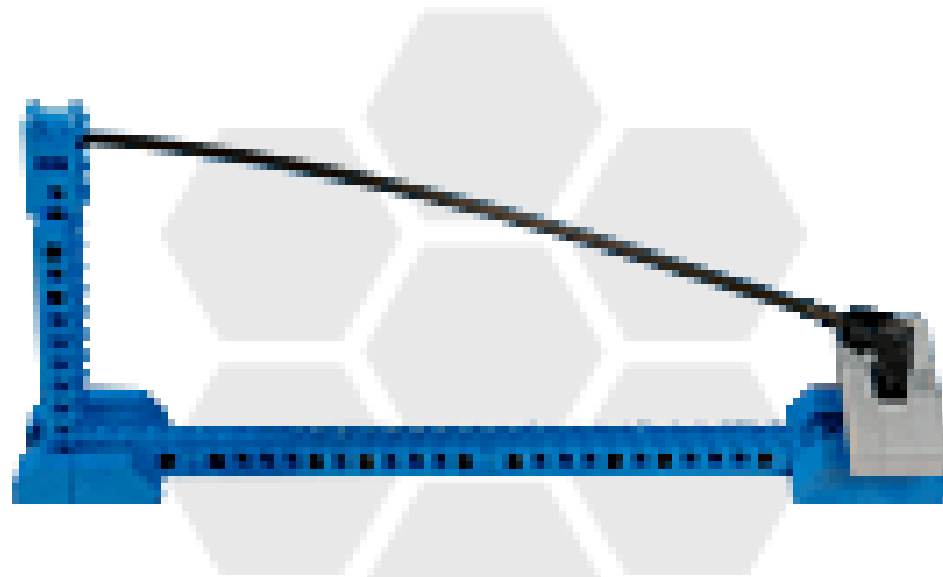




Atom Force Microscopy

max: 40 pts

- Tip Separated
 - ▶ 40 points

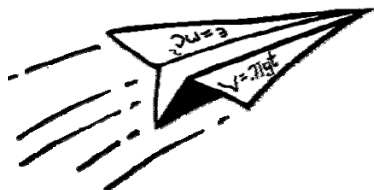
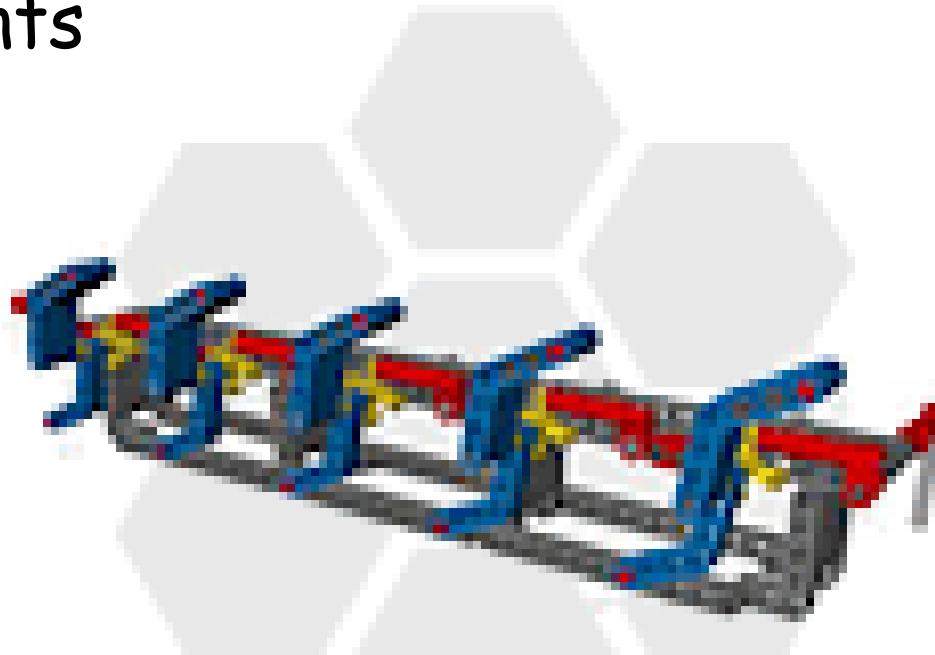




Self-Assembly

max: 30 pts

- Structure aligned
 - ▶ 30 points

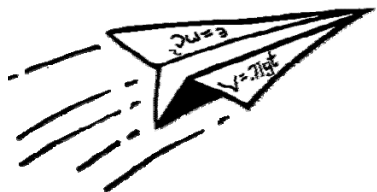




Smart Medicine

max: 50 pts

- Ball in slot in bone
 - ▶ 50 points

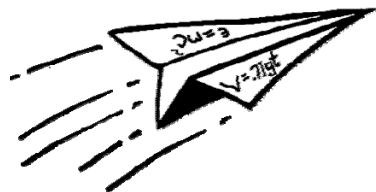




Nanotube Strength

max: 40 pts

- Truck on the frame
 - ▶ 20 points
- Cleanly Lifted
 - ▶ 20 points

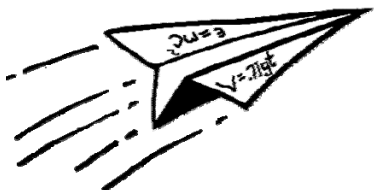




Molecular Motor

max: 40 pts

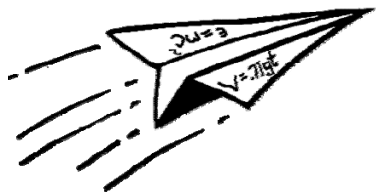
- Yellow Molecule through black frame
 - ▶ 40 points





Space Elevator max: 40 pts

- Yellow Cargo Down
 - ▶ 40 points (both teams)

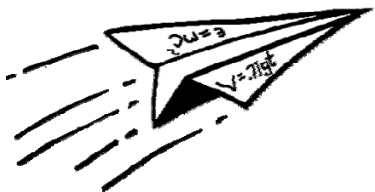




Fairness Bonus

max: 20 pts

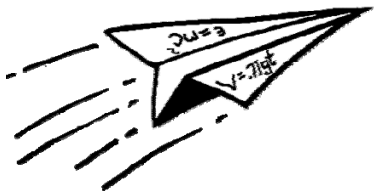
- Points in any 3 missions with RCX
 - ▶ 20 points
- Points in any 6 missions with NXT
 - ▶ 20 points





Rule Changes for 2006

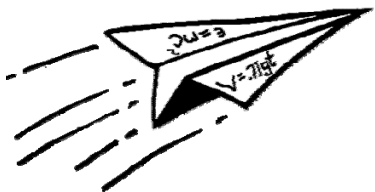
- Allowed Equipment
 - ▶ 1 brick: RCX or NXT
 - ▶ Same: 3 motors, 2 touch sensors, 2 light sensors, 1 lamp
 - ▶ Rotation Sensors
 - 3 (RCX only)
 - 3 - number of NXT motors (NXT only)
 - ▶ 3rd touch OR light sensor (RCX only)
 - ▶ Ultrasonic sensor (NXT only)





NXT Specific Rules

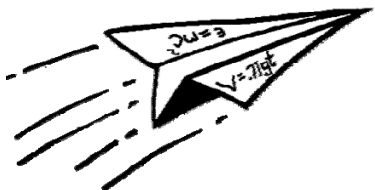
- NO BLUETOOTH!
 - ▶ Including in the pits!
 - ▶ It will be checked at robot checkin and in early rounds
- Note the special rule for rotation sensors
 - ▶ 3 minus number of NXT motors





Questions and Answers

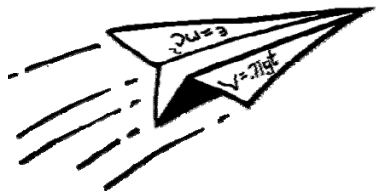
- Please come to microphones





Nano Quest Scoring Summary

<u>Individual Atom Manipulation</u>	40
<u>Smell</u>	30
<u>Stain Resistant Fabric</u>	70
<u>Atomic Force Microscopy</u>	40
<u>Self-Assembly</u>	30
<u>Smart Medicine</u>	50
<u>Nanotube Strength</u>	40
<u>Molecular Motor</u>	40
<u>Space Elevator</u>	40
<u>Fairness Bonus</u>	20
<hr/>	
Total	400





Links/Contacts

- Links

- ▶ www.firstlegoleague.org

- Team forum!

- ▶ www.ncafll.org

- ▶ www.playingatlearning.org

- ▶ groups.yahoo.com/group/NCaFLL

- Contacts

- ▶ marke@playingatlearning.org

