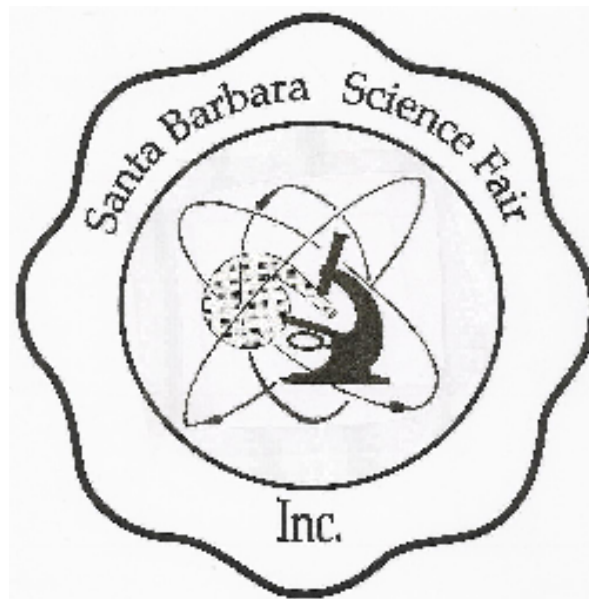


**54<sup>th</sup> Annual**

**Santa Barbara County Science Fair**

**Program and Catalogue of  
Exhibits**



**April 9 - 10, 2009**

**University of California, Santa Barbara**

# Science Fair Planning Committee

## ***Board Members***

<b>Shea Lovan</b>	President	Life Sciences Computing Group, UC Santa Barbara
<b>Allen Trac</b>	Judging Chair	Raytheon, Inc.
<b>Phil Estabrooks</b>	Treasurer	Raytheon, Inc.
<b>Laura Wilson</b>	Fundraising	La Colina Junior High
<b>Jane Lodas</b>	Secretary	
<b>Bob Hamber</b>	Special Awards	U.S. Navy

## ***Committee Members***

<b>Danielle Bean</b>	La Colina Junior High
<b>Laurie Burkhardt</b>	La Colina Junior High
<b>Margaret Connors</b>	National Center for Ecological Analysis & Synthesis
<b>Sally Isaacson</b>	Santa Barbara Botanic Gardens
<b>Rose Koller</b>	Santa Barbara County Education Office
<b>Steve Keithley</b>	Santa Barbara County Education Office
<b>Richard Schapker</b>	Science & Engineering Council of Santa Barbara, Inc.

## ***Expo Activities***

**Lauren Honeycutt  
Swanson**

California Nanosystems Institute, UCSB

## ***Student Welcome Guest Speaker***

**Scotty Allen**

ATK Space Systems

## ***Website and Database Management***

**Jim Woods**

Marine Science Institute, UCSB

# **Schedule of Events**

\* All activities take place at Corwin Pavilion in University Center unless otherwise noted.

## ***Thursday April 9, 2009 – Set-Up***

5:00 to 8:00 PM      Student Check-In and Project Setup  
Register for Expo events

## ***Friday April 10, 2009 – Science Fair***

8:00 to 8:30 AM      Students Arrive at UCSB

8:30 to 9:00 AM      Student Welcome and Opening Ceremonies in “The Hub” (the  
downstairs food court in the University Center)

9:00 to 10:30 AM      Medals Judging

10:30 to 10:45 AM      ~ Break ~

10:45 to 11:45 AM      Medals Judging

11:45 to 12:00 PM      ~ Break and Wrap Up ~

12:00 to 12:30 PM	Lunch  <i>Corwin Pavilion Courtyard</i>
12:30 to 1:15 PM	First Session: Expo Activities for All Participants  <i>Corwin Pavilion Courtyard</i>
1:15 to 1:30 PM	Notification of Finalists  <i>Posted in Corwin Pavilion (Location TBA)</i>
1:30 to 2:30 PM	Advanced Judging for Finalists  Second Session of Expo Activities for Non-Finalists
2:30 to 3:15 PM	Third Session of Expo Activities for All Participants
3:15 to 4:20 PM	Fourth Session of Expo Activities for All Participants

### ***Friday April 10, 2009 – Awards and Viewing***

4:00 to 8:00 PM	Public Viewing of Projects
7:00 to 8:00 PM	Awards Ceremony
8:00 to 9:00 PM	Project Breakdown

## **Additional Information**

### ***Check-In and Set-up***

- Short-term parking will be available in Lot 8 near Corwin Pavilion at UCSB during times designated for project drop-off and pick-up. Please see the science fair website for additional parking information.

## ***Parking***

- Parking is available in surrounding lots (Lot 3, 7 or 9) for \$2 after 5 PM.
- You must buy a ticket from the Pay Station in each lot. Do not park in spaces marked "Staff Only or "Faculty Only."
- The passes issued by the Pay Station are not valid in these spaces, and you WILL get a ticket.
- **We suggest parking in Mesa Parking Structure on Friday evening.**

## ***Judging***

- Each student or team will be interviewed twice during the morning medals judging.
- Interviews will last between 10 and 15 minutes. Prepared presentations should not be longer than 10 minutes to allow time for questions.
- Judges will be using a score sheet to evaluate each project on its own merit. All participants earning adequate points will receive the corresponding medal. See the Guide for Students document for details and a sample score sheet.
- Bring reading material or other quiet activities for the time between interviews.
- Students must stay by their projects at all times during judging.

## ***Lunch***

- A selection of bagged lunches will be provided to the students.

## ***Science Expo Activities***

- Activities will include hands-on demonstrations and lab tours.
- Students are expected to be courteous when visiting labs and must remain with tour groups at all times.

## ***Public Viewing and Project Breakdown***

- Projects will be available for public viewing from 4:00 to 8:00 PM on Friday. Projects must remain up until the awards ceremony.
- Students may take their projects down after the awards ceremony. Any projects remaining in Corwin Pavilion after 9:00 may be thrown away.

# Catalogue of Projects

## *Junior High*

### Junior Biological Division

<b>Project Number</b>	<b>Project Title</b>	<b>School</b>	<b>Student(s)</b>
101	Lima Beans: From Light to Dark	Goleta Valley Junior High School	Baldwin, Laura
102	High Protein Intake Improves BMX Performance	Goleta Valley Junior High School	McCullough, Jeff
103	Gender-Based Preferences in Hermit Crabs	Goleta Valley Junior High School	Lafferty, Olivia
104	Global Warming's Effect on Plant Growth	La Colina Junior High School	Davis, Natalie
105	Now You See It, Now You Don't!	La Colina Junior High School	Manson-Hing, Stephanie
106	How does the eardrum affect our hearing?	Goleta Valley Junior High School	Yamamoto, Kana
107	The Taster Gene and The Enjoyment of Vegetables	Santa Barbara Junior High	deBruynKops, Annie
108	Tadpole Development and Temperature: Does it Matter?	Goleta Valley Junior High School	Barker, Margot
109	Radiation Observation	La Colina Junior High School	Koper, Hannah
110	Which Way Is Up?	La Colina Junior High School	Lochner, Sofia
111	Microwaves: Amazing Appliance or Deadly Device?	La Colina Junior High School	Mullanix, Reed

112	The Effect of Magnetic Fields on Lima Bean Germination	Santa Barbara Junior High	Kerman, Jimmy
113	Plant Growth in Alternating Gravity	Santa Barbara Junior High	Hunt, Stephen
114	Which Salt Works	Goleta Valley Junior High School	Perez, Rafael and Arias, Joaquin
115	Activity Levels in Diabetic vs. Non-diabetic Mice	Santa Barbara Junior High	Zisser, Mackenzie
116	Horse Behavior	Santa Barbara Junior High	Erlach, Carolyne

### Junior Behavioral Division

Project Number	Project Title	School	Student(s)
201	IntelligAnts	Goleta Valley Junior High School	Cambron, Courtney
202	Watch My Lips: The Effectiveness of Lip Reading in Understanding Musical Lyrics	Goleta Valley Junior High School	Matson, Zoe
203	The Effect of Peer Pressure on Student's Perception and Rating of Their Own Homophobia	Santa Barbara Junior High	Eiseman, AnaSophia
204	Remember This	Goleta Valley Junior High School	Kosik, Eena
205	You Can Lead a Person To a Door But You Can't Make Them Open It	Goleta Valley Junior High School	Cruz, Hannah
206	Effective Page Finding	Goleta Valley Junior High School	Smith, Rachel
207	Does Encouragement Really Help?	La Colina Junior High School	Kumar, Anisha

208	Pitch'ure Perfect	Goleta Valley Junior High School	Tziouvaras, Xeni
209	Decision making in the face of risk	La Colina Junior High School	Feldman, Michael
210	Are You Smarter than Your Age Group?	La Colina Junior High School	Bak, SunYong
211	Memorization Scentsation	La Colina Junior High School	Read , Sydney and Garratt, Charlotte
212	Music and Math: Teenage Multitasking	Santa Barbara Junior High	Young, Bridget
213	The Behavior of Cats on Catnip	Goleta Valley Junior High School	Bommerez, Jonathan
214	The Effects of "Free" on Rational Thinking	Goleta Valley Junior High School	Richman, Daniel
215	Eyes, Nose, or Mouth: Measuring their Effectiveness in Face Recognition	Goleta Valley Junior High School	Singh, Rishika
216	Crank It Up! The Effects of Music on the Heart	Goleta Valley Junior High School	Hogan, Maureen
217	Which Side Are You?	La Colina Junior High School	Schroeder, Grant
218	Sanshoku	Goleta Valley Junior High School	Thomas, Cinder and Morin, Glenna
219	Be Afraid, Be Very Afraid!	Carpinteria Middle School	Pate, Jacob
220	Find the Target	Santa Barbara Junior High	Gil, Ivette

## Junior Environmental Division

<b>Project Number</b>	<b>Project Title</b>	<b>School</b>	<b>Student(s)</b>
301	Clothing Material Matters	La Colina Junior High School	Hauser, Eric
302	Plant Growth and Seed Germination	La Colina Junior High School	Aronson, Aryanna
303	Growing Green In A Bottle	La Colina Junior High School	Lippincott, Brandon
304	Up in Smoke, A Temporal Analysis of the Effect of Fireplace Smoke on Santa Barbara Air Quality	Marymount School	Granatelli, Anthony
305	Bacteria in the Beach	Goleta Valley Junior High School	Peñate, RJ
306	Pollution Affect on Sand Organisms	La Colina Junior High School	Clenet, Danielle

## Junior Microbiological Division

<b>Project Number</b>	<b>Project Title</b>	<b>School</b>	<b>Student(s)</b>
401	Is a Dog's Mouth Really Cleaner Than a Human's?	Goleta Valley Junior High School	Evans, Kate
402	Bioluminescence Lumination Lessens	Goleta Valley Junior High School	Grant, Shaunessy
403	Green Fluorescent Protein	Goleta Valley Junior High School	Lew, Evan
404	Which Carpet Stain Removers Work Best And Why	Olga Reed School	Stevens, Tyler
405	Is Your Plant Reaching Its Full Potential?	La Colina Junior High School	Hall, Ian

406	Spice It Up: The Effect of Spices on Bacteria	Goleta Valley Junior High School	Ruth, Miranda
407	Wired On Caffeine	La Colina Junior High School	Raphael, Hannah
408	Is That Clean	Goleta Valley Junior High School	Wetzel, Jennifer

### **Junior Physical Sciences Division**

<b>Project Number</b>	<b>Project Title</b>	<b>School</b>	<b>Student(s)</b>
501	Effects of Voltage and Concentration on the Fractal Dimension of Electrodeposited Copper Aggregates	Goleta Valley Junior High School	Gay, Daniel
502	Infrared Radiation Between Different Objects	Goleta Valley Junior High School	Boulanger, Marina
503	Leaching, What's in Your Water?	Goleta Valley Junior High School	Shinday, Nimisha
504	Does Heat or Absence of Heat affect Magnets?	Olga Reed School	Browning, Christopher
505	More or Less Speed Needed?	La Colina Junior High School	Fung, Anderson
506	I Can't Hear You!	La Colina Junior High School	Iuele, Jacob
507	Wave Energy	La Colina Junior High School	Krieger, Renee
508	Move Over! Here Comes The Magnus Effect.	La Colina Junior High School	Davis, Cassandra
509	Conditioning and Balance	Goleta Valley Junior High School	Fader, Emma and Lawson, Brianna
510	Which Puck Will Go Further?	Goleta Valley Junior High School	Hernandez, Amado

511	Measuring resolution of various aperture sizes in a pin hole camera	Santa Barbara Junior High	Speer, Colette
512	Rocket Experiment	Goleta Valley Junior High School	Koehler, Maximillian
513	What type of wireless internet should you be using?	La Colina Junior High School	Bramsen, Paul
514	Gas Guzzlers	La Colina Junior High School	Montag, Ryan
515	The Effect of Exposure Time and Filters in Printing	Santa Barbara Junior High	Bergseteren, Rachel
516	Crystallization of Epsom Salt	Goleta Valley Junior High School	Tiethof, Leah
518	How Corrosion Affects Metal Mass	Santa Barbara Junior High	Newton, Christopher

### **Junior Mechanical Sciences Division**

<b>Project Number</b>	<b>Project Title</b>	<b>School</b>	<b>Student(s)</b>
601	Solar Powered Electromagnetic Propulsion: Eco-Friendly Solution for the Existing Rail Infrastructure	Santa Barbara Christian School	Vanhecke, Nicholas
602	Visualizing Sound	Goleta Valley Junior High School	Agrawal, Malika
603	Sound Insulation	Goleta Valley Junior High School	DuBois, Paul
604	What Solvents Remove Chewing Gum From Cement?	Goleta Valley Junior High School	Greene, Katelyn
605	Is There Plastic In Your Water?	La Colina Junior High School	Tarakci, Erendiz
606	Frequencies of Guitar Strings	La Colina Junior High School	Rice, Eric

607	Vortex Hydro Energy	La Colina Junior High School	Hoeflich, Joshua
608	Helmet Wars!!	Goleta Valley Junior High School	Boumediene, Ansari
609	Slip No More!	Goleta Valley Junior High School	Houston, Anna
610	Chlorine Bleach's Effect on the Durability of Paper	Goleta Valley Junior High School	Goodner, Hailey
611	Effect of Trebuchet Arm Length or Counterweight Mass on Projectile Distance	Santa Barbara Junior High	Hogge, Aidan
612	The Effect of Wire Spacing on an Electromagnet	Goleta Valley Junior High School	Wopat, Jackson
613	Do different types of food affect the pitch of your voice?	Goleta Valley Junior High School	Fox, Savanna
614	Make Your Own Guitar Pickup.	La Colina Junior High School	Harris, Michael
615	Machines In Your Motions	La Colina Junior High School	Vance, Caroline
616	To Speedo or not to Speedo	La Colina Junior High School	Bergthold, Claire
617	GO WITH THE FLOW	La Colina Junior High School	Bainou, Forbes
619	BLAST OFF!	La Colina Junior High School	Merck, Owen
620	Comparison of Fuels for a Potato Cannon	Goleta Valley Junior High School	York, Benjamin

## Senior High

### Senior Life Sciences Division

Project Number	Project Title	School	Student(s)
701	The Impacts of Urbanization on a Local Stream	San Marcos High School	Castellanos, Jake and Perocco, Justin
702	Peptide Amphiphile C16GCGHH	San Marcos Continuation HS	Etsell, John
703	The Real World: Macroalgae	San Marcos High School	Zylstra, Shelby and Kinsella, Amy
704	The Effect of LED Wavelength on the Phototaxis of Artemia	San Marcos High School	Lincoln, Evan
705	The Effect Of Lipophilic Chain Length of Detergents on Breaking Down Oil in Seawater	San Marcos High School	Fretz, Jenise and McKay, Kelly

### Senior Life Sciences Division

Project Number	Project Title	School	Student(s)
801	Overpowering Oysters: the Effect of pH on the Bending Moment of Oyster Shells	San Marcos High School	Farris, Ken
802	How Does Wave Shape Affect Buoy Energy Production?	San Marcos High School	Manzo, Johnny
803	Electrolyze Your Life!	San Marcos High School	Zelko, Robin and Flattery, Samantha

