#### **2006 EYH Committee Members**

Aviva Sussman, EYH06 Chair

Mary Campbell and Marilyn Minshall, TC06 Co-chairs



### **Special Acknowledgments**

LAWIS EHY06 and TC06 are co-sponsored by LANL and UNM-LA.

TC06 co-hosted by AAUW-LA

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# Special thanks to these organizations and individuals

Sue Seestrom (ADWP)

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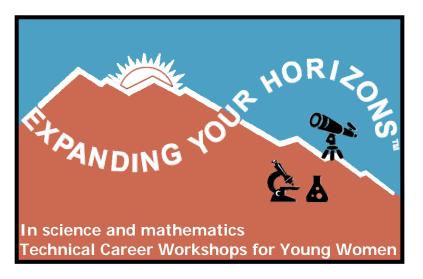
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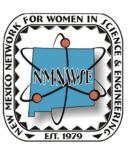
> University of New Mexico Los Alamos, and

**Los Alamos National Laboratory** 

present:



Wednesday, March 15, 2006 UNM-LA, Los Alamos, New Mexico http://nmnwse.org/eyh





#### Student Schedule - EYH06

8:00-8:30	Registration and Morning Snack
8:30-8:45	Welcome
8:45-9:50	Team Activity
10:00-11:10	Student Workshop One
11:15-12:00	Lunch
12:00-12:50	Keynote Address Claudia Lewis, Geologist. From Science Phobia to Scientist: Advice from a black sheep.
1:00-2:10	Student Workshop Two
2:15-3:30	College and Career Information Session and Afternoon Snack
3:30	Departure

### **EYH Teacher Conference – TC06**

8:00-8:30	Registration and Morning Snack
8:30-11:30	Workshops and Presentations
11:15-12:15	Lunch (Provided)
12:00-12:50	Join students for EYH06 keynote speaker Claudia Lewis, Geologist
12:50-2:30	Bradbury Museum (transportation provided)
2:30-3:25	College and Career Information Session and Afternoon Snack (with students)
3:30	Departure

### **Student Workshops**

#### 1. The Wonders of Polymers

#### Cindy Welch and Andrea Labouriau

Hands-on learning of the properties of polymers through exploring cross-linking reactions and examining water absorbing polymers.

# 2. Designing Patterns using Programming Logic and Mobile Robots

#### Jan Frigo

We will illustrate the concept of sequential programming by using the Mindstorm Robot system. The students will write their own programs to control a two motor mobile robot.

#### Web Design with HTML Vera Viail

This workshop will expose students to computer technical terms, software and networks. It will also provide students with hands-on experience in designing a web page.

# 4. Fractals: Math made that picture! Meghan Quist

Participants will explore fractals, learning about the math behind them and the computers that generate them. Students will then have the opportunity to create a fractal of their own!

# 5. Inventing Architecture: Expressive Buildings and Design with Nature - Julie Pearson

Provide historical and social framework for architectural innovation, with emphasis on historic design based upon natural and organic structures which has led the way to amazing structural feats, and contemporary architectural design with expressive and innovative envelopes.

# 6. Blood Drops Tell Tales Kathy Boerigter

In this workshop you will have the opportunity to learn how forensic scientists analyze blood residue left at crime scenes.

# 7. 450 nanometers of light – the catalyst to a great smile!

#### **Haley Ritchey**

We'll be repairing plaster casts of broken teeth with lightcured composite resin restorations.

### Student Workshops (continued)

#### 8. Tails of a Veterinarian Gretchen Yost

We will explore the world of a small animal veterinarian by looking at x-ray film, drawing up injections, calculating drug dosages, gowning and gloving for surgery, and stitching up some "wounded" stuffed animals.

### 9. DNA: The molecule that makes us UNIQUE Harshini Mukundan

Students will explore the theory and concepts of DNA and will be able to do hands-on activities.

# 10. Secret and Hidden Writing: Survey of Cryptology and Steganography Sarah Lownes

A survey of methods used to protect information, from Roman times to the computer age. Practical hands-on exercises are part of the workshop.

# 11. Fluids in Flight Elizabeth Hunke

What makes an aircraft fly? We will explore some fluid properties of an essential ingredient for flight---the atmosphere---and discuss the physical forces acting on an airplane. Then we will plan a trip to Durango and find out which aircraft travels there most efficiently.

# 12. Light and Lasers: Interaction with Matter Darla Graff Thompson

We will talk about visible light as electromagnetic energy and learn specifically about infrared spectroscopy as it relates to the vibrational energies of molecules.

#### 13. Acids and Bases Roberta Mulford

We will learn how to use indicators to determine pH of foods and soaps and learn a bit about acidity, basicity, and pH.

# 14. Aquifer in a box Kay Birdsell

This demonstration shows how water and contaminants move through a subsurface, modeled by various materials in a plexiglass box.