New Mexico Academy of Science - Annual Symposium

Plan to attend a free stage performance by noted Darwin actor Brian “Fox” Ellis of Fox Tales International (www.foxtalesint.com).

Imagine an evening at London’s Royal Geological Society, with the affable, young Charles Darwin.

Storyteller and science teacher, Brian “Fox” Ellis steps into Darwin’s shoes. Equal parts dramatic storytelling, stand-up comedy, and show and tell, the audience is immersed in the intellectual world of one of history’s greatest scientific minds.

Ellis brings a wide array of fossils, insects, plants and study skins so the audience can experience the discoveries of Darwin with hands-on analysis.

November 15, 2008
2:00 - 4:00 PM
@Domenici Education Center Auditorium
University of New Mexico Health Sciences Center
Event Sponsored by University of New Mexico Health Sciences Center and School of Medicine Office of Research.

NMAS Raffle Ticket 2008

Grand prize - a vacation week of your choosing at Mayan Palace or RCI resorts (airfare not included). 2nd prize - Museum tickets for four. 3rd prize gift certificate to UNM bookstore. Drawing is on November 15. Need not be present to win.

Please participate in our fundraiser and send one or more tickets and your check for $40 for each ticket to:
NMAS Treasurer:
Glenn Kuswa
96 Juniper Hill NE
Albuquerque, NM 87122

Name:___________________
Address:_________________
Phone:__________________
Email: __________________

Purchase one or more tickets yourself or give them to friends to purchase. Receipt will be mailed to purchaser. Photocopies of tickets are valid, but each ticket must be accompanied by $40.

Keep this portion of the ticket
Name:___________________
Address:_________________
Phone:__________________
Email: __________________
NMAS MEMBER NEWS...

Return the NMAS Raffle Tickets in this Newsletter
...with your check for $40 for each ticket...

Grand prize - a vacation week of your choosing at Mayan Palace or RCI resorts (airfare not included).
2nd prize - Museum tickets for four.
3rd prize - gift certificate to UNM bookstore. Drawing is on November 15. Need not be present to win.

Help keep NMAS strong by participating in this fundraiser.

Please Renew your NMAS Membership for 2008

Use the renewal form in this newsletter and renew TODAY!

NEW MEXICO ACADEMY OF SCIENCE

Founded in 1902 to foster scientific research and scientific cooperation, increase public awareness of the role of science in human progress and human welfare, and promote science education in New Mexico.

The Academy has been in continuous existence since 1915, and became formally associated with the New Mexico Museum of Natural History and Science in 1995.

DID YOU KNOW?

President’s Message – August 2008
Angela Wandinger-Ness

Whether you are a ‘science wiz or geek’ or someone who just wants to know more about science and how it impacts your life, the New Mexico Academy of Science may have something for you.

Who we are and what we are about…
In its second century, the New Mexico Academy of Science (NMAS) continues to champion scientific research and scientific cooperation—NMAS was founded in 1902 before New Mexico was a state! Informing the public of science in human progress and human welfare, as well as promotion of science education are major goals of the NMAS. The NMAS is member of the National Association of the Academies of Sciences (NAAS) and of the American Association for the Advancement of Science (AAAS). Two New Mexicans have served as Presidents of the NAAS (Dr. Lora Magnum Shields and Dr. David Hsi). The NMAS is led by a 20-member Board with elected officers covering wide ranging disciplines—geology, science education, physics, engineering, biology and natural science, biomedical science, astronomy, and mathematics (http://www.nmas.org/contacts.html).

Our 2008 public event…
On November 15th from 2-4 PM the NMAS will host a stage performance by Mr. Brian “Fox” Ellis at the UNM Domenici Education Center auditorium. This free event is open to the public and sponsored by the UNM Office of Research. Bring your students, children and families to witness a dramatic and humorous reenactment of Darwin and his travels aboard the HMS Beagle.

Supporting the NMAS…
The NMAS depends on its loyal members and support from the public to carry out many aspects of its mission “to foster scientific research and scientific cooperation, increase public awareness of the role of science in human progress and human welfare, and promote science education in New Mexico”. This year we plan a fundraising raffle. Enclosed with this newsletter you will find some raffle tickets that you may purchase yourself or ask others to purchase. The raffle tickets are $40/each. Our grand prize is a vacation week of your choosing at Mayan Palace or RCI resorts (airfare not included). Additional prizes include a gift certificate to the UNM bookstore and admission for a party of four to one of several New Mexico museums. The drawing will take place on November 15th at the Darwin performance. To purchase raffle tickets: 1) complete and return the ticket(s) with your name, address and phone number; submit payment in the form of a check to the NMAS ($40/ticket); we will send you a receipt to confirm your entry. You may photocopy the tickets in this newsletter and enter as many times as you wish, or ask your friends or colleagues to enter. You do not need to be present to win.
2008 State NMJAS Paper Competition Winners
Contributed by Lynn Brandvold, Director NMJAS
Cash awards were provided by a grant from Sandia-Lockheed Martin.

Senior Division
First Place
Megan D. Johnson
*How We Think, Who We Are: How We Learn*
Rio Rancho High School
Rio Rancho, NM

Second Place
Rebecca Alexander
*The Journey to Identify Antibiotic Compounds in New Mexico Lichens*
Grants High School
Grants, NM

Third Place
Terryll Bell
*Sulfur Spring: An Analysis of Microbiol Life and the Effects of Water Chemistry and Microenvironment in a Karst Spring*
Carlsbad High School
Carlsbad, NM

Junior Division
First Place
Phillip Lane
*Ants Harvest Crackers*
Kroogler Middle School
Aztec, NM

Second Place
Christian Fitzgerald
*Diamagnetism in Fruits*
Fitzgerald Homeschool
Albuquerque, NM

Honorable Mention
Daniel Ahrens
*Space Weathering to Blame for Earth Weathering*
Aspen Elementary School
Los Alamos, NM

Honorable Mention
Fiona McCrossin
*Reactions in Guinea Pigs Correlating to Sounds*
Sierra Middle School
Las Cruces, NM

Senior Division
First Place Winner Abstract

*How We Think, Who We Are: How We Learn? Phase IV*
*Megan Johnson*
*Rio Rancho High School*

Abstract
Methods of learning are a prevalent topic in psychological research. The object of this study was to determine a method by which learning style can be predicted using the explanatory variables gender, handedness, age, family size, birth order, and cerebral dominance. The learning styles studied were visual, aural, reading/writing, and kinesthetic. The sample consisted of 432 students between the ages of 8 and 18 and all data were collected using a survey and series of questionnaires. Cerebral dominance was determined to be the only variable of statistical significance although gender did play a minor role in predicting learning style. Though the data were statistically significant, the regression model produced in the multi-variate analysis proved a poor fit for the data. However, there exists a positive correlation of visual and reading/writing learning with left brain dominance and a positive correlation of aural and kinesthetic learning with right brain dominance. Extensions for this project include replacement of the surveys with performance based assessments to test for strengths rather than preference, refinement of the sample, and incorporation of additional variables.

Rio Grande Chapter
AVS Science & Technology Society Winners

The AVS Science & Technology Society, formerly the New Mexico Chapter of the American Vacuum Society, sends judges and selects its own winners in the paper competition and awards prizes to these winners as well as to their teachers/sponsors. The New Mexico Academy of Science is very grateful for their support.

Senior Division
First Place
Megan Johnson
Rio Rancho High School
School Sponsor: Rob Leeney

Second Place
Rebecca Alexander
Grants High School
School Sponsor: Mary Savacheck

Junior Division
First Place
Gabriel Joachim
Taylor Middle School
School Sponsor: Dr. Lorna Joachim

Second Place
Christian Fitzgerald
Fitzgerald Homeschool
School Sponsor: Alisha Fitzgerald
Charles Darwin did not "invent" the scientific theory of evolution...many naturalists of the time discussed biological evolution. Darwin defined a mechanism of evolution; he wrote: "I have called this principle, by which each slight variation, if useful, is preserved, by the term Natural Selection."

DID YOU KNOW?

The Taylor Middle School (Lovington, NM) Energy Club has been selected by the National Energy Education Departments Youth Award Competition as the Junior Level School of the Year for New Mexico and Junior Level Rookie of the Year at the national level. The club was invited to attend the National Energy Education Youth Forum Awards Recognition at the Department of Energy on June 20-23 in Washington, DC.

The Taylor Middle School Energy Club's broad goal is to educate peers, parents, and community about energy use and conservation. Approximately twenty-five students participated in the 2007-08 club activities. Two focus goals were created to meet the objective.

The first focus goal was to educate peers, parents, and community about energy use, renewable/non-renewable energy sources, and energy conservation. The "Let Lovington Know" campaign focused on educating community members about energy via posters, brochures, newspaper articles, radio commercials, community electronic announcement board, and asking the community to participate in the "Change a Light, Change the World" challenge. Students educated their peers through demonstrations using Project NEED kits.

The second focus goal was to provide a community service that educates others about energy conservation while helping needy individuals. Student/guardian teams adopted senior citizens or disabled community members as energy buddies. The student/guardian team donated their time to go and change light bulbs and change heater filters for their adopted energy buddy. Students provided their energy buddy with a laminated business card/magnet with contact information. For the first visit, the student/guardian team installed a compact fluorescent light bulb (bulb furnished by the club) in their energy buddy's home.

Editor's Note: The New Mexico Academy of Science was pleased to help support this award-winning New Mexico school with a travel grant to help students attend the NEED National Energy Conference.
Support Science and Science Education in New Mexico through the NMAS Endowment

The NMAS endowment invested amount, now about two years from its inception in 2006, exceeded the $10,000 mark during June, 2008.

Passing the $10,000 mark will qualify NMAS to withdraw and use earnings amounting to 5% of the average annual portfolio value. While the financial markets are down, the treasurer will recommend that the board not draw on the endowment, and encourage further investment for future growth.

The endowment is managed by the Albuquerque Community Foundation. The NMAS thanks the many generous individuals who have contributed one or multiple times to the endowment fund, or have given gifts in addition to dues.

Remember that your dues and contributions to the endowment are all tax deductable, as NMAS is a 501 (c) (3) organization registered with the Internal Revenue Service. Arrangements for donations to benefit NMAS and its endowment can also be made through a variety of methods, including trust instruments. For example, a trust can provide a guaranteed income during your life, with NMAS as the beneficiary of the remainder after your death. There are significant tax advantages for some of these gifts. We invite interested individuals to discuss potential options with their tax advisor, and the NMAS.

STATE OF NEW MEXICO
PUBLIC EDUCATION DEPARTMENT
MATH AND SCIENCE
RECOGNITIONS PROGRAM

On 5 February 2008, the Public Education Department (PED) Math and Science Bureau and the New Mexico Math and Science Advisory Council (MSAC) presented the (First Annual) Math and Science Day at the Legislature. Speakers included Dr. Robert Eisenstein of MSAC and Dr. Veronica Garcia, Secretary of PED. Mary Jo Daniel, Science Specialist, Math and Science Bureau, PED, presented awards to New Mexico students who had outstanding 2007 NMSBA Scores in Math and Science. The two NM finalists of the Presidential Awards for Excellence in Mathematics and Science Teaching were introduced -- Karl Agar, Santa Rosa H.S. (math) and Jennifer Coughlin, Eldorado H.S., Albuquerque (science).

NMAS Members...
Nominate a New Mexico Teacher for the
2008 NMAS Outstanding Science Teacher Awards

Please help us to identify the BEST New Mexico science teachers. Fill out this nomination form and return to the address below by October 3.

Nominee:
Name/Title______________________________
Teaching Position(s)________________________
Years teaching experience____________________
Department__________________Grade level(s)________________
Name of School__________________________
School mailing address_____________________
City________________________New Mexico Zip_____
e-mail_______________________________
School telephone ( )-_____________________
Home telephone ( )-_____________________
Home address____________________________
City__________________________New Mexico Zip_____

Nominated by:
Name/title________________________________
Mailing address____________________________
City________________State________Zip_______
e-mail_______________________________
Work telephone___________________________
Home telephone___________________________
Association with nominee_________________

IMPORTANT! Attach at least a short narrative providing support for the nomination. This should include pertinent information and examples of outstanding teaching qualities of the nominee. Supporting statements seconding the nomination should be attached if they are accompanied by the names, addresses, and telephone numbers of the individuals providing seconding statements. Please do not send videos or other electronic material. The deadline for the nomination process this year is October 3, 2008 Please mail the completed nomination forms, supporting narrative, and resume to:
Mr. Harry F. Pomeroy, Jr.
NMAS Awards Committee
1512 Kingston Place
Clovis New Mexico 88101
Phone: 575-762-0878
e-mail: francis@plateautel.net

(for “Subject” please use ‘NMAS Awards,’ so it won’t be trashed for “SPAM.” Thank you.)

DID YOU KNOW?
Charles Darwin conceived his theory of natural selection in 1838. After 20 years of research and thought, he was writing up his work in 1858 when he received an essay from Alfred Russel Wallace describing the identical idea...prompting immediate joint publication of both of their theories.
Membership Form
New Mexico Academy of Science

New Membership [ ] Renewal 08 [ ] Membership Year other than 08 [ ] Publications [ ] Donation [ ]

Date ___________________ Name ________________________________________________________________

Employer/Firm/Affiliation ____________________________ Title ________________________________

Primary Interest (geology, biology, chemistry, physics, science education, etc.)_____________________

Mailing Address: ____________________________________________________________________________
__________________________________________________________________________________________

Phone ___________________ FAX ___________________ email _________________________________

Check if your address is different from that on the mailing label of this newsletter [ ]

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<td>New Mexico Journal of Science</td>
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<td>From Sundaggers to Space Exploration</td>
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Membership Class (check one)

[ ] Member $25/year
[ ] Student $15/year
[ ] Subscription (Libraries only) $30/year

[ ] Contribution to the NMAS Endowment

Membership Subtotal: $ _______
Donation Subtotal: $ _______
Publication subtotal: $ _______

Total: $ _______

Membership includes 3 newsletters and occasional special Journal of Science volumes (sent to life members and members who have paid their annual dues during the volume’s year of publication).

Send check for membership and/or publications and donations, payable to NMAS, to:
New Mexico Academy of Science
1801 Mountain Rd. NW
Albuquerque, NM 87104

Please...consider making a donation to the NMAS Endowment to support our science education programs!
NMAS Raffle Ticket

Name: ___________________
Address: ___________________
Phone: ____________________
Email: ____________________

For each ticket sold, one entry will be placed in our grand prize drawing. Grand prize will be awarded to a lucky ticket holder. Please participate in our fundraiser and send one or more tickets and your check for $40 to:

NMASTreasurer:
Glenn Kuswa
96 Juniper Hill NE
Albuquerque, NM 87122

Please make checks payable to NMAS Raffle.

Grand Prize: A vacation to your choice at Mayan Palace or RCI Resorts. (Airfare not included.)
2nd Prize: Museum tickets for four.
3rd Prize: Gift certificate to UNM bookstore.

Drawing will be held on November 15. Need not be present to win.

Please participate in our fundraiser and send one or more tickets. Thank you for your support.

Keep this portion of the ticket.

Email: ____________________
Phone: ____________________
Address: ___________________
Name: ____________________