

Education & Public Outreach

Dr. Lisa L. Brown

Director, Pennsylvania Space Grant Consortium

Overview of E&PO Activities

General Public:

- Space Day at Penn State
- Frontiers in Science Lecture Series

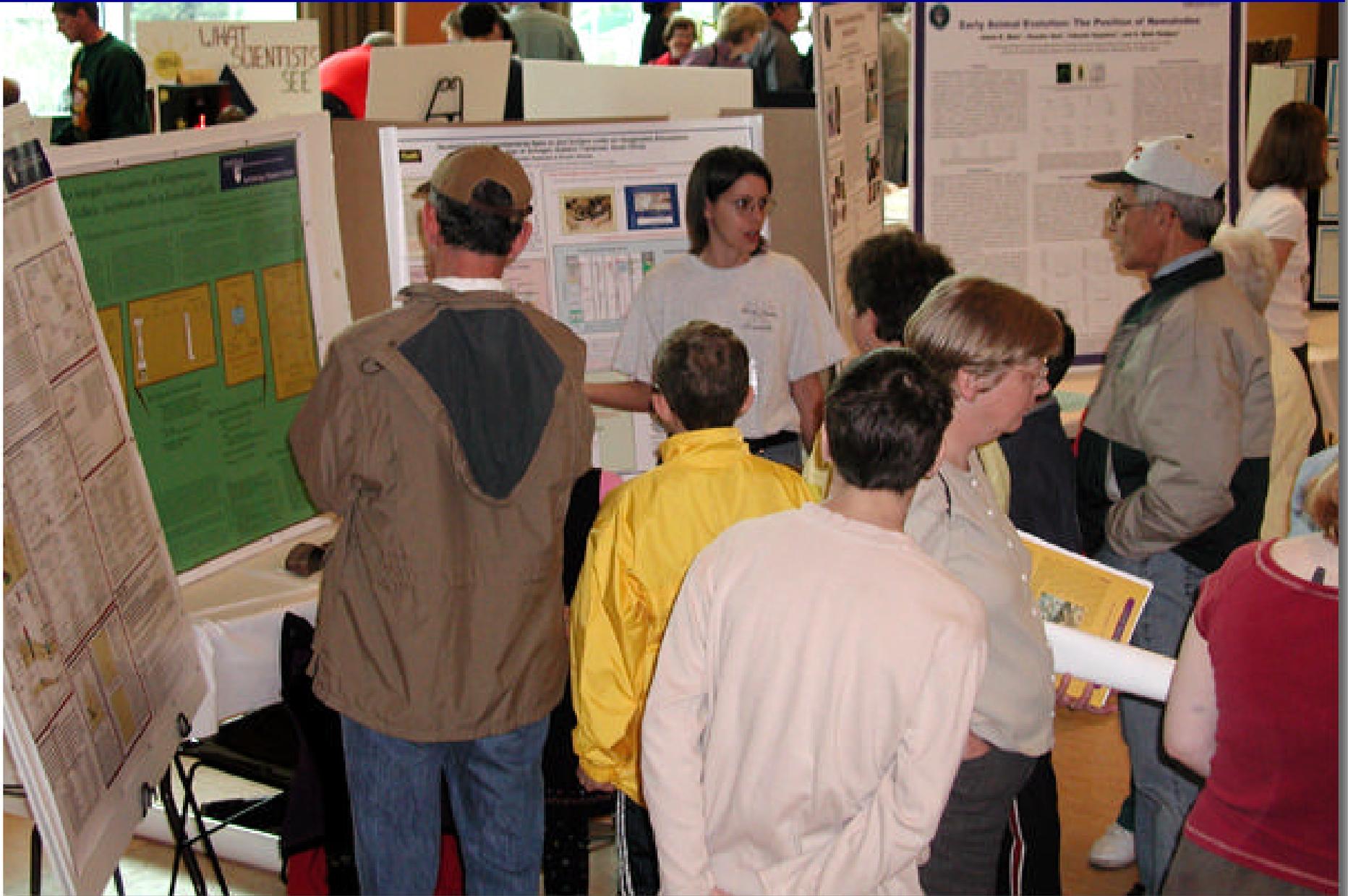
K-12 Education:

- Astrobiology magazine supplement
- Teacher Workshop
- "What's In The News" public television show
- WISE Week

Higher Education:

- Astrobiology Minor
- WISER – Women In Science & Engineering Research

Space Day at Penn State



Space Day at Penn State



Jim Kasting, Penn State

"The Origin of Life on Earth: How Did it Happen and Could it Happen Elsewhere?"

Janet Siefert, Rice University

"Unveiling the Origin and Early Evolution of Life: Molecular Phylogeny"

Paul Hoffman, Harvard University

"The Snowball Earth: A Climate Catastrophe that Life Survived"

Bruce Jakosky, University of Colorado

"The Search for Life on Mars"

Blair Hedges, Penn State

"DNA Clocks and the Evolution of Life"

Chris Chyba, SETI Institute

"Jupiter's Moon Europa and the Rebirth of Exobiology"

ASTROBIOLOGY:



The Search for Life in the Universe

BY DAVID PACCHIOLE



FREE Magazine Supplement
Written for Grades 9-12

Sponsored by:

Research Penn State Magazine

NAI Education Office

PSARC

PA Space Grant

Pfizer, Inc.

PENNSTATE



1-week science teacher workshop

Dr. Jim Kasting, Lead Instructor



WORKSHOPS FOR

Science
Teachers



Astrobiology: The Origin and Early Evolution of Life
June 24-28, 2002

WPSX - Public Broadcasting

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NEWS

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Weekly 15-min current events show

Multimedia (TV, newspaper, web)

Grades 4-7

Reaches >5 million children
in 32 states

WISE Week Summer Program

June 17-23, 2001

1-week science camp for
Middle-school girls



Week-long astrobiology project
Dr. Bob Minard, Chemistry



Astrobiology

By: The Evolution Gurus

Sarah Bigley, Katie Charnock, Alexandera Clarke, Alyson Gillis, Jennifer Jasper, Kimberly Newcomer, Andrea Young



- ✍ Astrobiology is the study of life in outer space.
- ✍ Day One: We made iodine fingerprints and took samples of organic matter to put through the gas chromatography and mass spectrometry machines.
- ✍ Day Two: Finished derivitizing some samples and ran samples through the mass spectrometer (aka the very expensive machinery)
- ✍ Day Three: Finished mass spectrometry. Made pizza box spectrometers and looked at different gaseous light. Nick blew up a helium balloon.
- ✍ Day Four: We compiled all viable information into this here presentation.



Astrobiology Minor

18 credit hours

15 different courses

REQUIRED INTRODUCTORY COURSE (3 credits: Sem: 1-6)

EARTH 002 (3): The Earth System --OR--

GEOSC 021 (3): The Origin and Evolution of The Earth and Life

REQUIRED COURSES (9-10 credits: Sem: 5-8)

ASTRO 140 (3): Life in the Universe --OR-- ASTRO 291 (3): Astronomical Methods and the Solar System

GEOSC 204 (4): Geobiology --OR-- BIOL 427 (3): Evolution

BIOL/GEOSC 474(3): Astrobiology

ADDITIONAL COURSES (5-6 credits: Sem: 5-8) Select 5-6 credits from:

ASTRO 475W (3): Stars and Galaxies

BIOL 405 (3): Molecular Evolution

BMB 401 (2)/402 (3): General Biochemistry

GEOSC 416 (3): Stable and Radioactive Isotopes in Geosc

GEOSC 419 (3): Organic Geochemistry

GEOSC 481 (3): Solid Earth and Planetary Geophysics

METEO 466 (3): Planetary Atmospheres

MICRB 201 (3): Introductory Microbiology



Women
In
Science &
Engineering
Research

