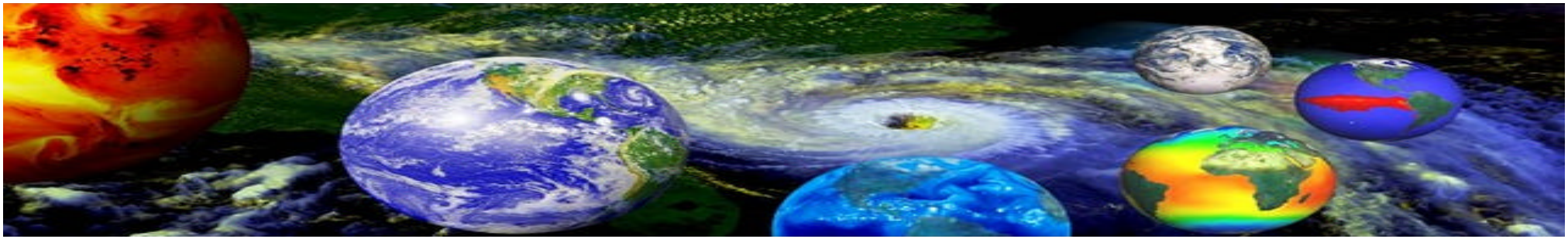
Building Community in Astrobiology Through Education and Public Outreach

Karen Dodson

NASA Astrobiology Institute

Executive Council Meeting

7 April 2002



Ask An Astrobiologist

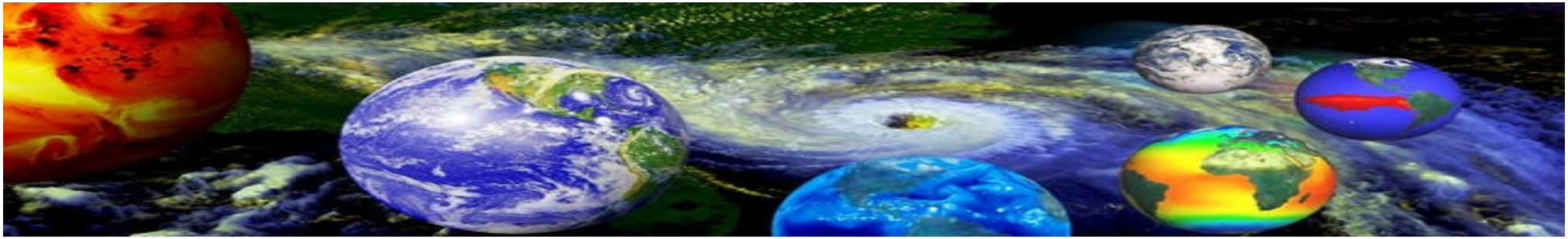
- Direct interaction with users
- Average of 40 questions per month
- Featured Team: Penn State University

Astrobiology Pathfinder

Pathfinder Profiles

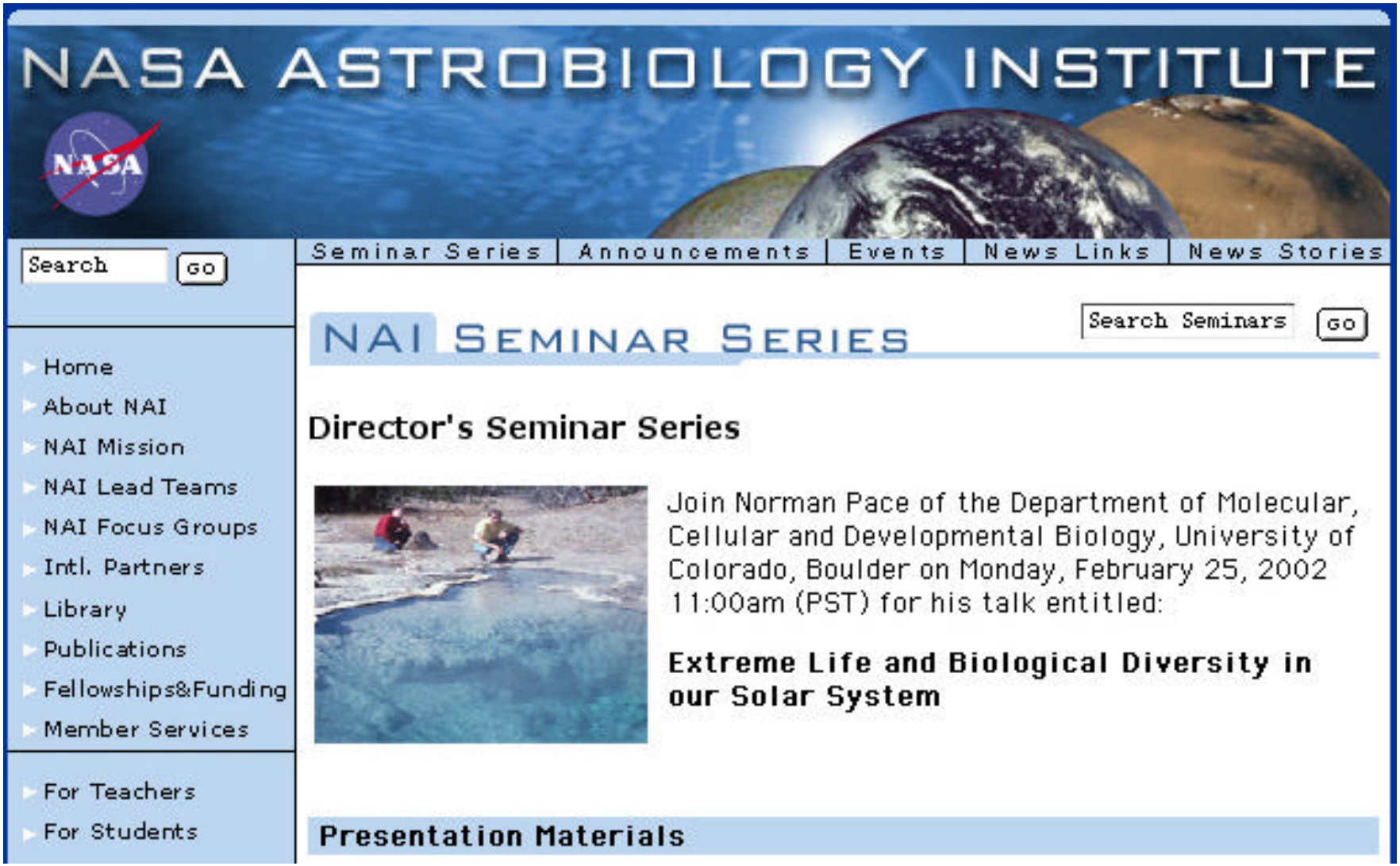
- Contains biographies of researchers, engineers, students etc.

- Video clips of investigators talking about how they became involved in their field of research



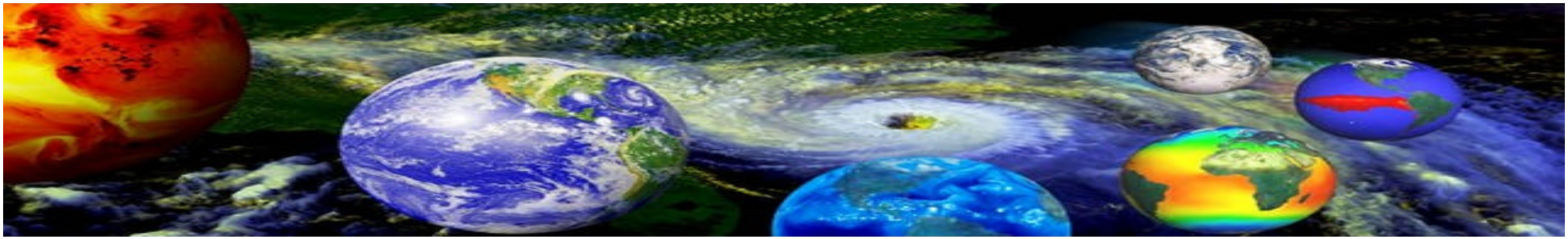
QuickTime™ and a
Sorenson Video decompressor
are needed to see this picture.

Video Seminar Series



Video Projects

- Clips used for presentations, websites, workshops, conferences, cds
- Available to all teams for use

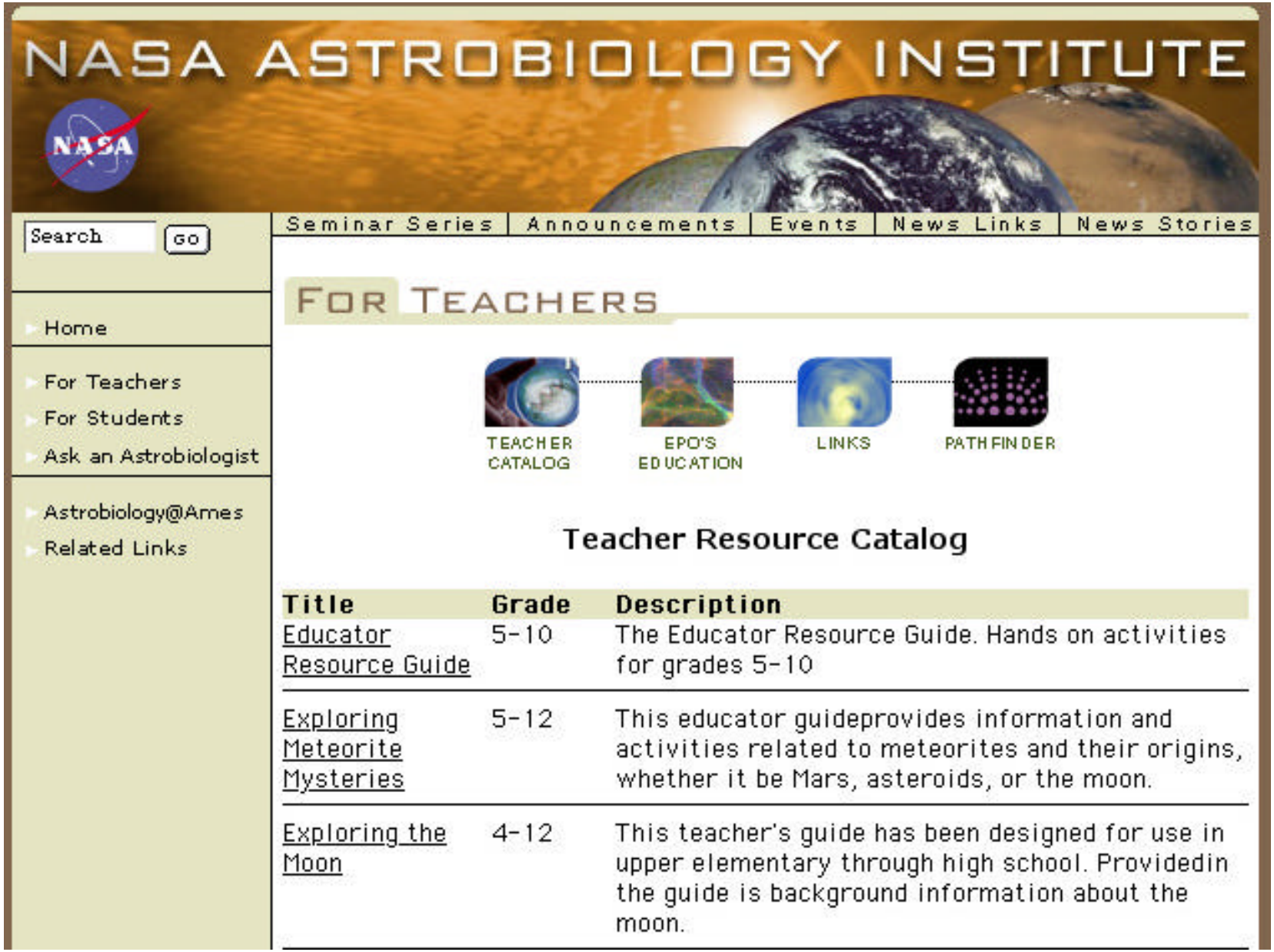


Habitable Worlds

*Select a World to Explore **

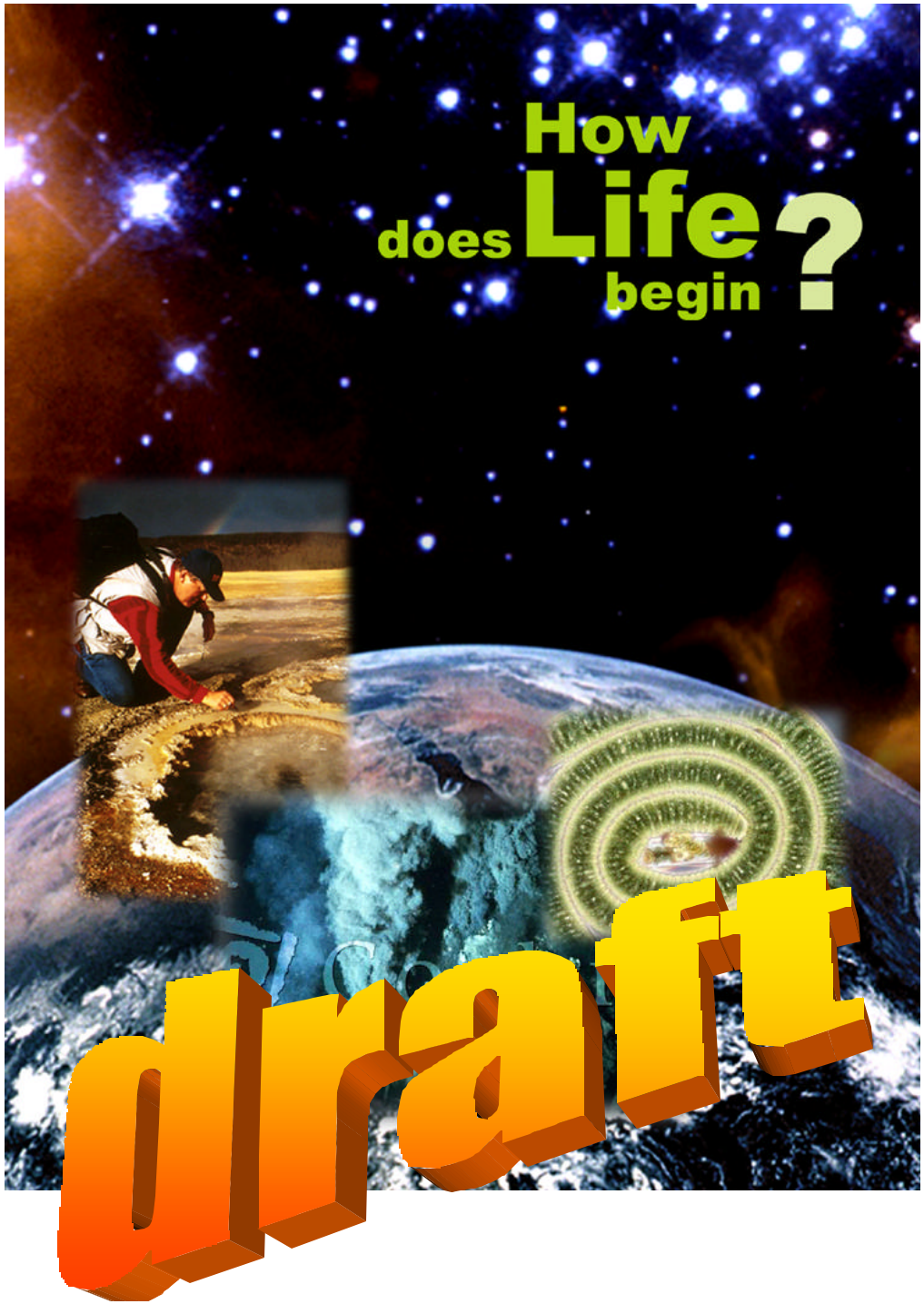
Search the Solar System for Signs of Life

Teacher Resource Catalog



Mysteries of Microbes: Fascinating Fieldwork

- Series of webcasts with an interactive element
- Accompanied by curriculum, background information and hands on activities

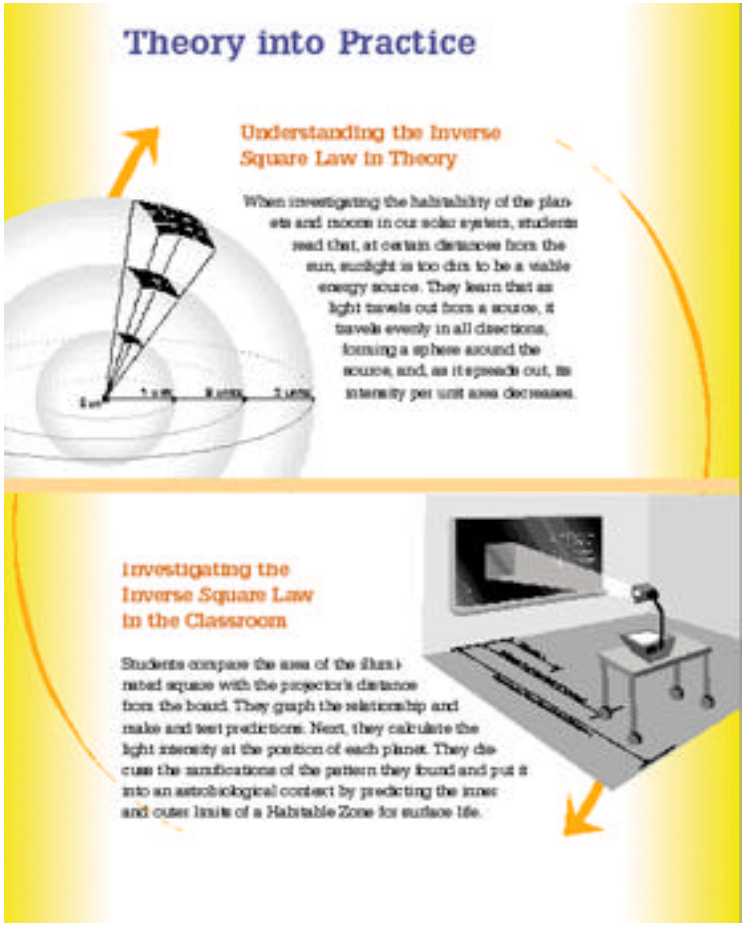


Poster Series

- Group materials identified as a need at last year's EPO retreat
- Collaborative group working on the look and educational content
- Products shared by all

Life on Earth…and Elsewhere?

- Background Readings
- National Science Standards
- Blackline Masters
  - Student Activity Sheets
  - Think About It
  - Math Extensions



Theory into Practice

Understanding the Inverse *Square* Law in Theory

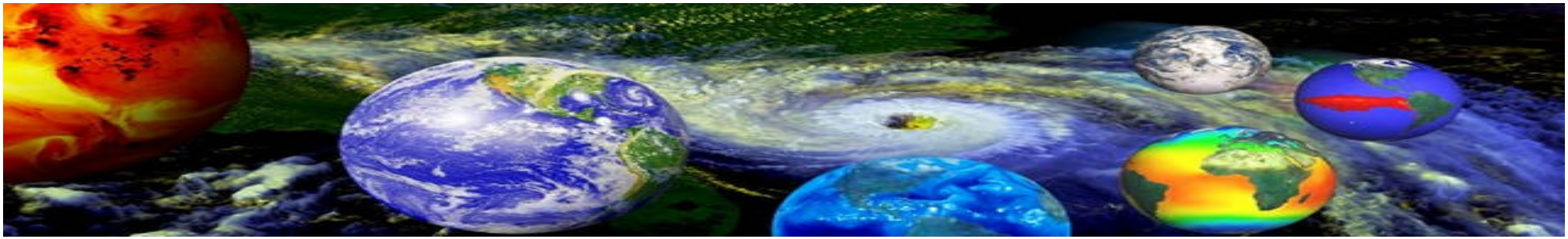
When investigating the habitability of the planets and moons in our solar system, students read that, at certain distances from the sun, sunlight is too dim to be a viable energy source. They learn that as light travels out from a source, it travels evenly in all directions, forming a sphere around the source, and, as it spreads out, its intensity per unit area decreases.

Investigating the Inverse *Square* Law in the Classroom

Students compare the area of the illuminated square with the projector's distance from the board. They graph the relationship and make and test predictions. Next, they calculate the light intensity at the position of each planet. They discuss the ramifications of the pattern they found and put it into an astrobiological context by predicting the inner and outer limits of a Habitable Zone for surface life.

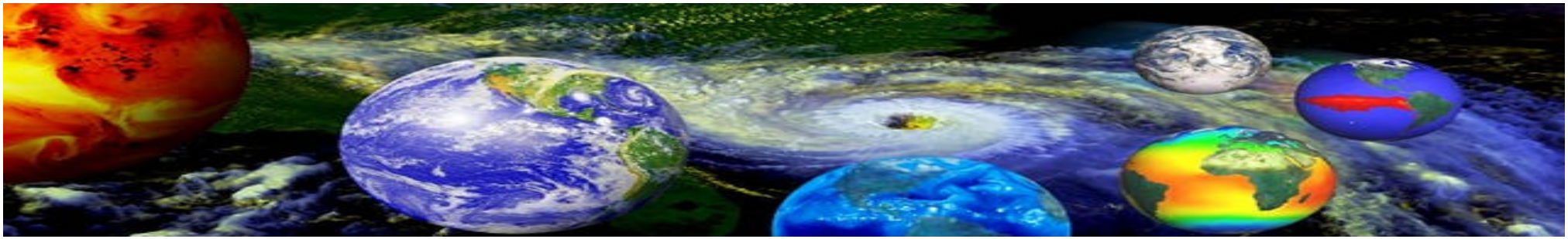
Conferences

- NSTA
- NABT
- TOPS
- NCTM
- Earth Systems Processes Conference
- Moffett Field Airshow
- NASA Education Workshops (NEW)
- NASA OSS Education Council
- Space Biology Museum Network Meeting

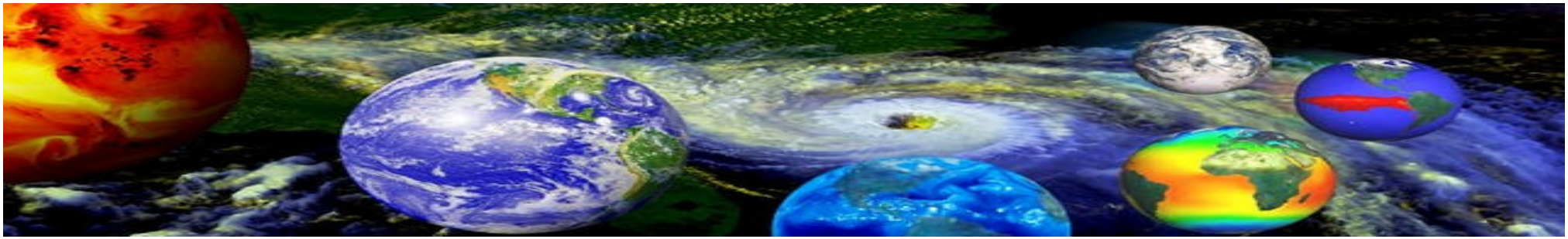


Reporting

- NAI Annual Report
- NASA Edcats reporting
- Space Science Education Resource Directory



Co-funded by NAI EPO…

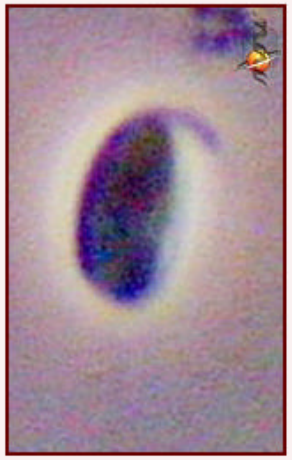


AstroVenture

Voyages Through Time

- CD-ROM based curriculum
- Integrated science for students in grades 9/10
- A year-long course in six modules
- Evolution as the overarching concept

Micro*scope
www.mbl.edu/microscope



Amastigomonas

download image

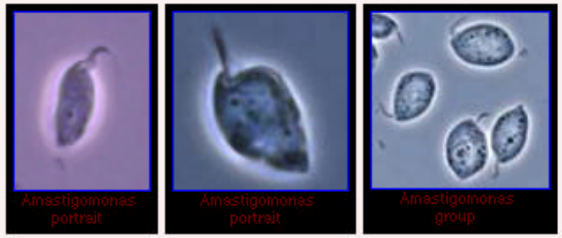
CCMP

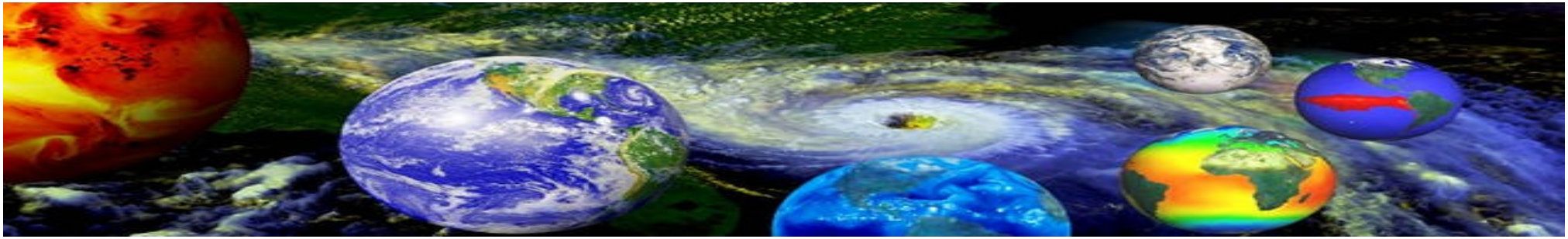
NCBI Molecular data | ATCC Cultures | Google Internet | Tree of Life | PubMed Literature

Description of *Amastigomonas*: Biflagellate gliding protists, flagella insert subapically and to one side, dorsal surface of the body is covered with a thin organic theca, and the ventral surface produces pseudopodia. Anterior flagellum is enclosed basally or completely by the theca. Posterior flagellum trails under the body, both flagella may be very difficult to see. From marine and freshwater sites. Several species; Type species A. debruynei de Saedeleer 1931.

Image information: Amastigomonas (a-ma-stig-o-moan-ass), a commonly encountered gliding flagellate from soils, freshwater and marine habitats., Cell enclosed in the dorsal lorica which makes the front flagellum seem thick. Recurrent flagellum lies under the cell and can be made out as a darker curving region. Phase contrast. Poor picture. This picture was taken by David Patterson and Michele Burford of material from a commercial prwan farm in Queensland, Australia.

There are 4 image(s) of Amastigomonas



micro*scope V2 TM supported by NASA Astrobiology Institute index

Questions, Comments?