



2007-08 PROM/SE-SMART Science Institutes for K-12 teachers

"The Evolution of Everything"

Day 1: Oct 10, 2007

The Origin and Evolution of the Universe

Day 2: Nov 27, 2007

The Origin and Evolution of the Earth

Day 3: Feb 28, 2008

The Origin and Evolution of Life

How do you explain change on both a big and small scale to your students?

These three inter-related sessions build on each other to explain change in physical and biological systems from the big scale to the small, including the origin and evolution of the universe, Earth, and life.

The concepts of physical and biological change run through the entire K-12 science curriculum. Change is a fundamental property of scientific research and of the process of science itself. Understanding change is applicable to all science levels, K-12, and is as relevant to lower grades teachers as much as it is to upper level teachers. These sessions will help you respond to those hard to answer questions from your students about change. For example, talking about the breakdown of rocks and the development of soil are two small-scale changes that lie along the continuum of the changes that began at the Big Bang. Understanding the ultimate origin of matter and transitions of matter begins with the origin of the universe and continues through the formation of stars, solar systems, planets, and life forms.



Courses will use an inquiry-based "how we know what we know" approach to these ambitious topics. All sessions will be held at the Cleveland Museum of Natural History, enhancing the topic, and will involve local scientists. Sessions are designed to give teachers fresh insight to these concepts.

- "Origin and Evolution of the Universe" will start with the Big Bang and the evolution of the elements from which all matter is made. Galaxies, stars and our solar system will be discussed. This program will lay the foundation for the remaining two programs of the year.
- "Origin and Evolution of Earth" will pick up where "Universe" leaves off and will address the driving question, "How did the surface of the Earth get to look like it does today?"
- "Origin and Evolution of Life" will continue the theme of physical and organic change through time, as well as devote time to issues that teachers face in teaching organic evolution.

Institute Details

Audience: K-12 science teachers and administrators. Principals, curriculum directors, and superintendents are invited.

District Support: PROM/SE will reimburse districts for substitute costs for K-12 PROM/SE Science Associates (1 per building). Additional teachers may attend. PROM/SE will pay meal and material costs for all who attend. Individuals are strongly encouraged to attend all three sessions.

Cost: FREE, but registration is required.

Location: Cleveland Museum of Natural History, 1 Wade Oval Drive, Cleveland, OH, (216) 231-4600

Daily Schedule:

Registration: 7:30-8:00 am and continental breakfast
Program Begins: 8:00 am
Lunch: 12 noon-12:45 pm
Program Ends: 3:00 pm

Registration: [Register by Oct 3](#). A form is attached. Send to your PROM/SE site coordinator Nancy Burce, nburse@wviz.org, Phone: (216) 916-6422, Fax: (216) 916-6423



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Please register by Oct 3 by sending this form to your PROM/SE site coordinator: Nancy Burce, nburse@wviz.org, Phone: (216) 916-6422, Fax: (216) 916-6423

I will be attending the following sessions (participation in all three sessions is recommended):

Day 1: Oct 10, 2007, The Origin and Evolution of the Universe

Day 2: Nov 27, 2007, The Origin and Evolution of the Earth

Day 3: Feb 28, 2008, The Origin and Evolution of Life

All sessions held at the Cleveland Museum of Natural History, 1 Wade Oval Drive, Cleveland, Ohio

Name: _____

PROM/SE Associate

School: _____

District: _____

Mailing address: _____

City _____ State _____ Zip code _____

Email address: _____

2nd Email address: _____

Telephone: _____

Grade level(s): _____

Course(s) taught: _____