

**Earth Science CSET Prep
Exploratorium Teacher Institute
July 31 to August 11, 2006**

Instructors:

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Daily General Schedule outline from 12- 5:30

12 – 2:00 Study, group and project time
2:00 – 2:30 General info and questions (daily practice test)
2:30 - 3:30 Content and Activities
3:30 - 4:00 Break (including videos)
4:00 – 5:15 Content and Activities and sharing
5:15 – 5:30 Questions, review exam or retest
Check-off of content domains

Week 1 – Earth and Space science

Day 1 – Intro and Start of Astronomy Day 1

Monday – Eric, Lori and Linda
Exploratorium introduction
Intro to NCLB
Intro to CSET
Ice breaker and introductions
Intro CSET class Schedule
Test registration materials
Library tour
Astronomy day
 Planets and Satellites
Organize for 12- 2 study time period
Friday sharing
Dinner and field trip on 2nd Thursday
Take tests on line – provide website

Day 2 – Astronomy Day 2

Tuesday – Linda, Eric and Lori
Info about test essay criteria
Astronomy day
 Galaxies and Stars
 Solar Systems
Planet Earth
 Geologic Time

Day 3 - Planet Earth and Geology

Wednesday – Eric and Lori
Planet Earth and Geology
 Earth Interior

Density
Geologic Processes
Fossil Basics – with Blake Wigdahl

Day 4- Planet Earth

Thursday – Eric, Lori and Sebastian

Tectonic Evolution
Locating earthquakes
Magnetic striping
Beginning of Geologic Processes

Day 5 –Geology and Sharing

Friday – Eric, Lori, and Sebastian

Rock cycle, Rocks and Minerals
Surface processes
Volcanism
Sebastian's Aesthenosphere and lithosphere demo

Week 2 Other Spheres (Hydrosphere and Oceans) and Energy

Day 6 – Energy and Hydrosphere

Monday – Eric and Lori

Energy in the Earth System
Seasons
Budget- Earth's Energy Budget: Inflow and Outflow
Water cycle
Circulation in the Oceans
Tides
Waves
Water sheds
Moon phases

Day 7 – Atmosphere and Cycles

Tuesday – Eric and Lori

Heat transfer (conduction, convection and radiation)
Atmospheric structure and composition
Climate Variations in Time and Space
Cycles
Biogeochemical Cycles
Carbon, and Nitrogen Cycles
Oxygen in Air
Ocean layers
Ocean currents Horizontal and vertical
El Nino
Atmosphere layers
Greenhouse effect and carbon cycle

Optional:

Stars – Linda

Day 8 - Back to Earth

Wednesday – Eric, Lori, Sebastian and Blake

Meteorology:

Coriolis effect and convection

Atmosphere wrap-up

Geology:

Mapping- geologic / topos / hazards

Stream tables and factors involved in surface processes

- With special guest

Major Economic Earth Resources

Natural Hazards

Earthquakes

USGS hazards

ABAG hazards

Inverness Research with Judy and evaluators

Sebastian Magnitude and prediction (jumping)

Day 9 – Local Geology

Thursday- Eric and Roxy

Field trip to Headlands and Dinner

A view of stratigraphic layering of the ocean bottom

Restaurant in Sausalito

Day 10 - Presentations and sharing

Friday – Everybody

Final wrap-up and fill-in of material