

EARTHCOMM GOALS AND EXPECTATIONS FOR TEACHERS

1. Use motivational teaching methods, interactive technologies, and manipulatives to pique student interest and help all students to understand the practical effects of Earth science and essential concepts and principles that underlie energy within the Earth system, geochemical cycles, and the origin and evolution of the Earth system.
2. Facilitate students' understanding of inquiry and ability to inquire scientifically by having students identify questions about local problems and issues, design and conduct investigations, use technology and mathematics, form scientific explanations using logic and evidence, analyze alternative explanations, and communicate and defend scientific arguments.
3. Emphasize the connections and relationships between Earth science and other academic disciplines.
4. Establish an expanded learning environment for students through fieldwork, technological access to data, laboratory and other classroom activities.
5. Nurture communities of science learners by establishing student teams, orchestrating discourse about scientific ideas, building networks of local, regional and national information exchange, and using the services of Earth and space organizations.
6. Raise students' awareness of environmental and resource issues and problems in their communities.



EARTHCOMM GOALS AND EXPECTATIONS FOR STUDENTS

1. Develop knowledge and understanding of practical and essential Earth science concepts and the principles Earth science shares with other disciplines.
2. Understand basic principles of Earth system science and think from an Earth system science perspective.
3. Develop an understanding of scientific inquiry and abilities needed to conduct scientific inquiry.
4. Develop technology-oriented abilities for human enterprises in Earth and space.
5. Understand the nature, origin, and distribution of Earth's energy, mineral, and water resources; technologies used to locate, extract, and process these resources; and dependency on these resources to satisfy our wants, needs, and expectations.
6. Understand how terrestrial and extraterrestrial processes affect Earth's materials, environments, and organisms, how scientists study these processes on Earth and from space, and how some processes benefit humans while others pose risks.
7. Understand how human activities influence Earth's spheres, processes, resources, and environments, and understand factors that affect the size and distribution of human population and Earth's capacity to support life.
8. Become aware of career opportunities in the Earth and space sciences, how professions and businesses benefit from technologies used by Earth and space scientists, and how these combined professions and businesses are related to regional economies.

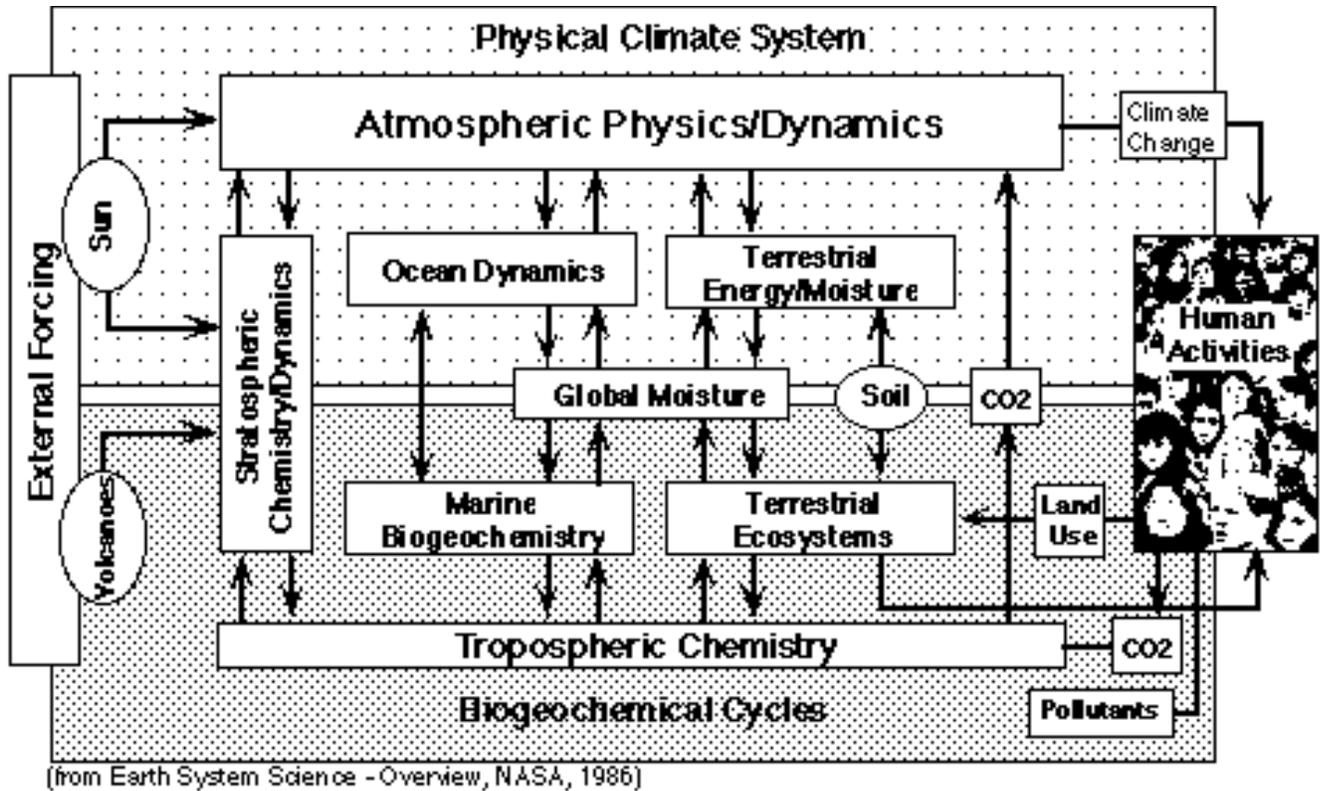


EARTHCOMM DEVELOPMENT TIMELINE

- 1998** Teams of earth science educators develop first activities with direction from the American Geological Institute
- Activities are reviewed by scientists and teachers and revised
- First teacher enhancement workshop in preparation for pilot testing
- 1999** Pilot testing completed
- Meeting of pilot test teachers for input
- Development and revision continues from this point onward with input from scientists, other reviewers and teacher testers
- Teacher workshops at four regional testing centers to prepare for field test
- It's About Time publishing joins project
- 2000** Field testing completed
- Final pre-publication revisions



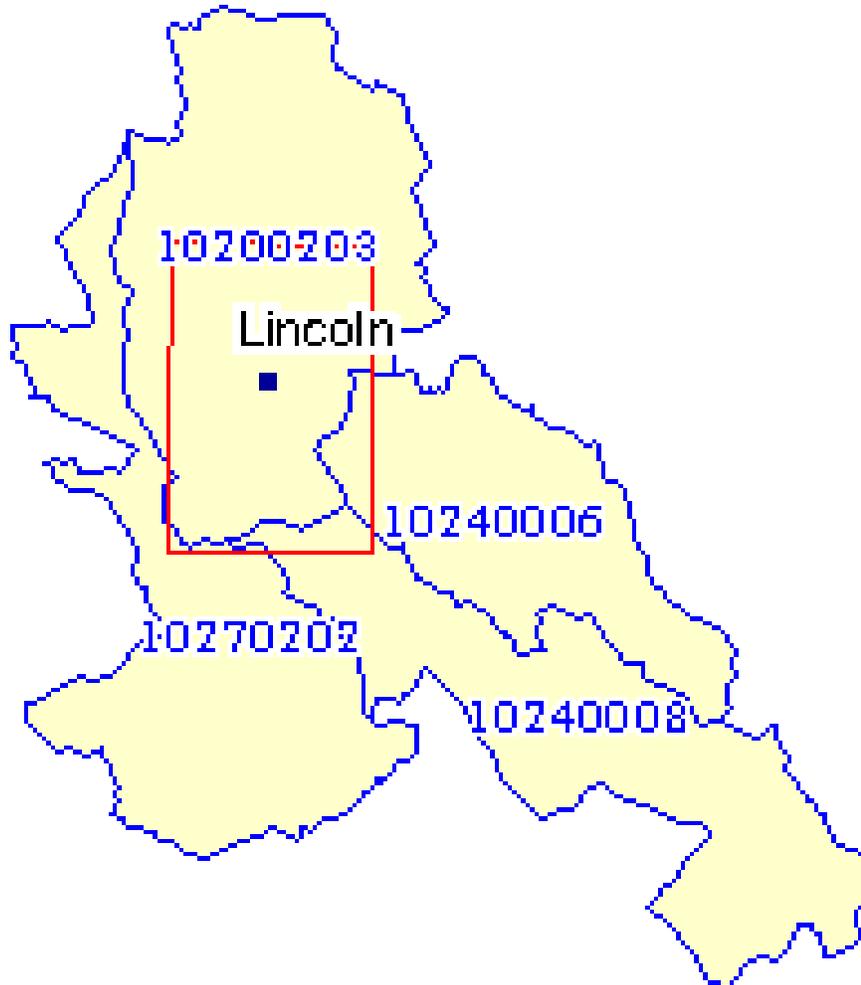
EARTH SYSTEMS DIAGRAM 1



This diagram shows the major interactions among Earth systems.
 Available online at <www.usra.edu/esse/essonline/>



LANCASTER COUNTY, NE AND ASSOCIATED WATERSHEDS



- Characteristic parts and properties of the system
- Boundaries of the system

