

# ECOsystems of the Lithosphere

## Training Course Content - Level One

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### Course Description

The lithosphere is the solid zone that comprises the surface of the earth. It is marked by composition, depths, altitudes, and latitudes.

The lithosphere is defined by the presence of essential substances (primarily inorganic minerals such as carbonates, sulphides, and oxides and elements such as gold, diamonds, etc.), water, energy (geothermal and solar) and a diversity of organisms, both in and on or around the solid medium.

Some of the reference texts used in this course are

Exploring Our Living Planet , by the National Geographic Society,  
Earth , by Erlich and Erlich,  
Geobioscience , by Zajic,  
Environmental Geoscience: Natural Systems and Man ,  
by Arthur N. Strahler and Alan H. Strahler,  
Approach to Geophysics through Analysis of Continental Drift,  
by H. Takeuchi,  
Man and the Ecosphere, by Scientific American, and  
Prospecting in Canada, by A. H. Lang.

As well, reference articles from scientific publications such as New Scientist, Scientific American, Science, American Scientist, National Geographic, etc. and relevant magazine journals such as Organic Gardening, Harrowsmith, Mother Earth News, etc. are constantly reviewed and incorporated into the class material.

Both types of reference sources are augmented by international conference proceedings, papers, publications from DOMAIN ECODYNAMICS Research Foundation, as well as a large selection of video and audio recordings.

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These references attempt to bridge the enormous range of disciplines entailed in considerations of the lithosphere: physics, chemistry, biology, limnology, ecology, geology, hydrology, physiology, astronomy, meteorology, climatology, plate tectonics, ecoculture (sustainable agriculture), etc. All information is applied to the understanding, planning, creation, and operation of Circuited ECOdynamic Systems of the lithosphere.

There are complex processes that must be understood in the provision of Life Essentials such as healthy food, air, and water. Human life is dependent upon other life forms. The exchanges, the relationships between life forms or organisms, the inorganic cyclic resource, and the behaviour of Man, both in obtaining his needs and in gaining the processing of the ablatives and excrements, are issues of the lithosphere.

In the lithosphere we consider the junctures, the boundaries and the penetration and diffusion of the lithosphere into the hydrosphere and the penetration and diffusion of both, into the atmosphere.

Through our study of the lithosphere and the corresponding systems of the atmosphere, and the hydrosphere, and the interlinking biosphere, we generate skills at sustaining, improving and extending habitable room for life. We become skilled and knowledgeable at supporting life and heeding the dependencies and relationships of life.

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### Terminal Performance Objectives

On completion of training the trainees:

1. Will be able to define and bridge the following range of disciplines to the lithosphere: physics, chemistry, biology, limnology, geology, hydrology, ecology, physiology, astronomy, meteorology, climatology, plate tectonics, ecoculture, etc.
2. Will better understand and be able to implement the complex processes involved in providing Life Essentials through the use of Circuited ECODynamic Systems.
3. Will understand man's interaction with natural systems, through the integration of geoscience and ecoscience.
4. Will better understand and be able to interconnect skills and knowledge gained in the training courses ECOSystems of the Atmosphere, Hydrosphere, and Lithosphere, for the purposes of providing Life Essentials through the use of Circuited ECODynamic Systems.

Ecosystems of the Lithosphere, Level 1, will deal with the knowledge and skills necessary in incorporating into DOMAIN's Circuited ECODynamic Systems the processes of cycling of inorganic nutrients, the building up and breaking down of organic matter, accelerated soil-forming and microbial bioreactors, the practice of ecoculture (sustainable non-tillage agriculture, companion planting, French-intensive gardening, DOMAIN's planting strategies, etc.) .

This will involve an examination of the species diversity and physical conditions which make these ecosystems unique, yet vital to the proper functioning of global food, weather, and resource cycles. There will also be an examination of the role of man in the integrity of lithosphere ecosystems, especially with regards to pollution, disruption through development, and harvesting of resources from these systems.

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Instruction will involve methods of integrating man into these ecosystems with minimal disruption.

Trainees will also be instructed in field, laboratory, and full-scale implementation of the skills derived from the study of ECOsystems of the Lithosphere.