

Personal view for education on Earth science

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We have a personal image of natural phenomena without knowledge of natural science through our daily experience. We feel that nature is a complicated system. Natural science is a system of knowledge on nature based on observations of various natural phenomena and the basic knowledge on nature was classified into physics, chemistry and biology. Note that Nobel prizes are classified according to these categories. Basic sciences taught in high school are also classified into these categories.

However, education on nature based on the conventional classification does not seem to be a good introduction in education on natural science, because physics, chemistry and biology have their own disciplines which deal with limited aspects of nature.

The Earth Science, on the other hand, deals with the real world which contains physical, chemical and biological aspects. Therefore, it should be a subject in which students are able to learn how these 3 aspects are combined in nature.

I think that the crucial concept in Earth Science is "formation and modification of structures in nature from atoms to universe" in which the spatial structures and time variations are important key words to understand whole nature.