

Earth Systems Education for dissemination of earth science education and its teacher's education

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1. Prologue

Earth Science has been studied by less than 20% high school students. For the dissemination of earth science education, some integrated science courses centered at earth science must be developed. Until now some integrated science course like Basic Science, Science I and Integrated Science have been studied in the Course of Study. But these integrated science courses did not have the clear idea and principle and collected together all physics, chemistry, biology and earth science disciplines, which did not integrate them on the basis of some principle. For the dissemination of earth science education, we must develop the integrated science course centered at earth science in the near future.

I will introduce Earth Systems Education which is an integrated science program based on earth science, which was developed mainly by Dr. Mayer, Professor of Earth Science at The Ohio State University in 1991. Earth Systems Education has 7 understanding objectives as follows;

2. FRAMEWORK FOR EARTH SYSTEMS EDUCATION

Understanding #1: Earth is unique, a planet of rare beauty and great value.

Understanding #2: Human activities, collective and individual, conscious and inadvertent, affect planet Earth.

Understanding #3: The development of scientific thinking and technology increases our ability to understand and utilize Earth and space.

Understanding #4: The Earth system is composed of interacting subsystems of water, rock, ice, air, and life.

Understanding #5: Planet Earth is more than 4 billion years old and its subsystems are continually evolving.

Understanding #6: Earth is a small subsystem of a solar system within the vast and ancient universe.

Understanding #7: There are many people with careers that involve study of Earth's origin, processes, and evolution.

3. Epilogue

We developed the curriculum of Earth Systems Education at primary and Junior high school level. We developed the program for teacher's education. I will introduce them at my presentation.