

Preparing Future Engineers for Environmental Aspects of Deepwater Oil and Gas Exploration and Development

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This is the proposed addition to last summer's One Laptop Per Child (OLPC) education program (OLPCorps), which was targeted to improve learning in African children of ages 6 to 12. OLPCorps was initiated in seventeen African nations during the summer of 2009. Teams were equipped with tools, resources, and know-how to develop a grassroots-learning environment. The goal of the proposed addition is to use Etoys, a program in-stalled on the OLPC, to stimulate curiosity and give children the ability to explore, experiment, and express while learning basics of mathematics and earth science.

Etoys is a free open-source, computer-based educational environment for teaching children powerful ideas in compelling ways. It is an application developed for kids with the understanding that children learn best by experimentation and play. It has been used for the development of several geographic- and geologic- based learning applications that integrate mathematics and science. Teachers from last summer's OLPCorps program will be introduced to the learning applications developed for the proposed addition and the learning applications will be taken to the teams they established.

The education of exploration geologists should begin at an early age. A conscious effort is required so as not to enervate their interests at an early age, but develop their minds towards problem solving and environmental issues. We will attempt to add earth sciences subjects to last summer's OLPCorps program such as geography, geology and GIS/GPS combined in a multidisciplinary approach with the core subjects of mathematics and science, whilst building an awareness of environmental issues and geologic hazards related to processes like deep sea drilling.

Everyone assumes all the bad stuff happens immediately after a disaster. However, it is obvious after the Gulf of Mexico oil spill; there are long-term consequences that need to be addressed by well-informed engineers. It's vital to get the knowledge base and problem solving skills started early in a potential engineer's education. Children, who have been introduced to these learning applications, will be better suited in their engineering careers to address geologic/scientific problems.