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Curriculum Units by Fellows of the National Initiative
2013 Volume V: Energy Sciences

Fusion: The Energy of the Future?

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by Eric Laurenson

This seminar is dedicated to renewable energy and the consequences of our energy intensive society including global warming. This unit will explore the nature of energy sources and generation. In my AP Physics II B class and Gifted Physics I classes, I will explore the viability of fusion as an energy source. I will also make the case that we need to have a monumental effort much like the Apollo Missions on a global scale to be able to solve the scientific issues of fusion. Money and lots of effort would drastically reduce the time to realize a commercial fusion reactor. In my physics classes, we spend a lot of time on energy and electricity. I will explore the need for carbonless fuel sources, primarily fusion, as well the relative amounts of energy we get and use from different sources, including fossil fuels and renewables. I will make the case that we should be pursuing controlled fusion. The unit will culminate in a Creative Design Project to design parts of a fusion power plant.

(Developed for AP Physics 2B, grade 12, and Gifted Physics 1, grades 11-12; recommended for Physics first-year courses, grades 9-12, and Physics second-year courses, grades 11-12)

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