Teaching Science with Science Fiction

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Abstract

The curriculum unit to be developed will focus on the use of science fiction material, both printed and audiovisual, to teach a number of required concepts from the School District of Philadelphia’s standardized curriculum for chemistry. With regard to the Planning and Scheduling Timeline for Chemistry, those units involving matter and energy, atomic structure, and chemical reactions will be of particular interest. The unit involving matter and energy is intended to examine changes that matter undergoes and the flow of energy through matter. Understanding the structure of the atom, as a means of understanding the makeup of matter, is the overall goal of the unit on atomic structure. As for the fundamental concept addressed in the unit on chemical reactions, it involves the ability of the students to predict the products of a chemical reaction based on a set of given reactants. As envisioned, this will be an ongoing project throughout the academic year rather than limited to a short period of time. A portion of the unit will involve an interdisciplinary approach involving a few preselected members of the English and science departments within Robert E. Lamberton High School. Therefore, the ultimate goal of this curriculum unit is to use science fiction as a pedagogical tool in motivating student interest in the sciences, and in particular chemistry.