



## **The Plausibility of Interstellar Communication and Related Phenomena Depicted in Science Fiction Literature and Movies**

Guide for Curriculum Unit 98.06.02

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This unit is designed to be taught by an English teacher for at-risk high school students to stimulate their curiosity about astronomy and to teach them to develop concepts about our solar system in the Milky Way Galaxy, and to teach students to use these concepts to evaluate the plausibility of interstellar communication and travel depicted in science fiction literature and movies. In other words, it attempts to equip students to answer the question, "Just how 'far out' is science fiction on the subject of interstellar communication and related phenomena?"

To answer the question, "What science fiction depicting interstellar communication is based on plausibility, and what is not," students must first look at scientific facts and the laws of nature, such as the law of nature that nothing anywhere in the universe travels faster than the speed of light.

Students will identify the location of the Solar System in the Milky Way Galaxy, and grasp some sense of the Universe beyond the Milky Way. Students will need to grasp the concept of the speed of light and a light year. They will study probability as it applies to the likelihood of extraterrestrial civilizations. They will study the plausibility of interstellar communication through space travel versus communication via radio waves.

Students will use the data they gather and the concepts they study to evaluate the plausibility of the science fiction they will read and the movies they will view.

Students will learn to use the standard five-paragraph essay to communicate solutions they have found for implausible facts and phenomena in a science fiction short story and a science fiction movie.

In an exercise of the imagination students also will be challenged to turn the telescope from extraterrestrial intelligence toward themselves, grappling with the task of creating a character description representative of society and themselves as individuals that they would broadcast into space, given the capability.

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