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The Last Frontier

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Astronomy has always been a favorite part of the 8th grade curriculum. Students are always eager to study this subject. Many of them are science fiction fanatics, faithfully watching shows like the X-Files, Deep Space Nine, Voyager, Babylon 5, and Space Above and Beyond. Terms used in the above shows such as zero gravity and black holes will be addressed, along with commonly used astronomical vocabulary.

In addition, it is important in the teaching of science to keep up with current events. Astronomical topics/discoveries are constantly in the news. Examples include the comet that could be seen in the night sky, the Hubble Telescope repair, and the discoveries of many new galaxies and even some planets. In the minds of students these discoveries can make young imaginations soar and fuel their search for knowledge.

A curriculum unit on astronomy is also an excellent way to teach the scientific method. Activities that are part of this topic are a great lead into high school for the 8th graders.

Prior to this unit, it is assumed that stellar evolution and the history of the Universe have been studied. This unit will be structured in the following manner: the history of space flight, space basics (including physics), astronauts, living and working in outer space, and the possibility of life elsewhere in the Universe.

Taking off from Earth, orbiting and space travel involve a number of planetary laws/forces such as inertia and gravity. These will be discussed and their impact on space travel will be shown through demonstrations and hands-on activities.

Living and working in outer space is an integral part of space travel. Spacesuits, living quarters, food and recreation will be covered. Breathable air and waste recycling are important considerations. These will be covered in a Space Station activity.

Distance is an important, yet hard concept for students to understand. This includes the definitions of light year and astronomical unit. We will investigate what is the fastest travel speed, and just how far away planets, moons, stars, etc. really are. Activities will cover these topics.

(Recommended for Earth Science, General Science, and Astronomy, grades 8-9)