

How do the Earth, Moon and Sun move within our Solar System?

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In recent history, the understanding of the Earth and its' place in the solar system has changed. Many teachers, as well as students often revert to the memorization of planets and reciting facts about space. Very few people can actually explain how the Earth fits in to the universe and how the Sun and Moon fit within our lives on the Earth. Today, students need to understand the movement of the Earth, Sun and Moon within our solar system in order for them to truly conceptualize concepts of how our the relationship between the location, size and movement of all three structures enables the Earth to continue to maintain its unique atmosphere. In addition, the idea of how all of this movement causes changes in days and nights, Moon phases and seasons on Earth. Many students carry the misconception that the Sun is the center of our universe. Not only is this heliocentric approach to astronomy incorrect, it often leads to more confusion to students as they move to higher grades. This will be taught at the sixth grade level in a middle school classroom. The class will be an inclusion classroom consisting of students who are labeled as Special Education students as well as students who are academically gifted. The class will be co-taught and the average class size will be around 32 students. The students heterogeneously mixed based on abilities. I am writing this unit as a supplemental unit for our sixth grade curriculum. It is considered an "add on" unit to address the common understanding of the Earth, Moon and Sun relationships. This unit will be taught using LFS strategies focusing on essential questions. In addition, it will address the NGSS standards of: MS-ESS1-1. Develop and use a model of the Earth-Sun-Moon system to describe the cyclic patterns of lunar phases, eclipses of the Sun and Moon, and seasons. The unit will also address the Science and Engineering practices of developing and using models and analyzing and interpreting data.