Statement of Purpose

A 5the Grade Unit on Astronomy and Space Science

The learner needs to be able to identify important concepts relating to Astronomy and Space Science. All learners need to gain an understanding of the structure of the universe. The learner needs to know that our Solar System is part of the Milky Way Galaxy. It is one of many galaxies in the known universe. The learner needs to be able to understand the predictable and observable patterns to the movements of the Earth and our Moon in relationship to each other and the Sun. The learner needs to know there are similarities as well as differences between the Earth and other planets and other objects in our Solar System. The learner is naturally curious about the seasons. The learner needs to be aware of the orbit of the Earth around the Sun and the reasons for the variations in temperature and weather conditions that this movement creates .The content is made meaningful through it usefulness for and the relevance to addressing problems facing society either locally, nationally, or globally. (Chiaelott,2006)

The learner will gain knowledge of the societal value of this environmental awareness. By being informed about the relation and effects of the Sun has on the Earth, the learner will know how climate effects life on Earth. This knowledge will assist the learner in understanding the environmental changes that can occur because of them. This information can be useful when making decisions about legislation concerning the environment and the atmosphere. This knowledge can help the learner develop into a well-rounded and informed individual. The Ohio State Standards states that learner at the fifth grade level be able to explain the characteristics, cycles and patterns involving Earth and its place in the Solar System.

The subject matter is important for all learners because it will benefit them in the future. They will need to be aware of the basic principles of astronomy and space science which affects their daily lives. The learner may develop an interest in the subject that could lead to more in depth study in the future. This unit will help develop a greater understanding of the Earth and its relationship with other celestial bodies.

There are several educational goals included in this unit. The learner will learn to make observations of the Earth, Moon and Sun .The National Science Teachers Association Standards include the knowledge of the structure of the Earth System, Earth's history and Earth in the Solar System. They will learn to make predictions about the Earth, Moon and Sun and how their relationship affects life on Earth. They will collect data about the phases of the Moon and climate changes. They will learn to indentify the various parts of our Solar System. The learner will make models and illustrations of the placement of each planet, our moon and Sun. The learner will make hypothesis about the Earth and the effects the Sun has on it. The learner will be able to define rotation, revolution and orbit. They will investigate the recent effects of climate change on the Earth.

Resources

National Science Teacher Association <http://www.nap.edu/openbook.php?record_id=4962&page=107>

Ohio State Standards <http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEPrimary.aspx?page=2&TopicRelationID=1705>

Chiarelott,L. *Curriculum in context*.ThompsonWadsworth: Belmont,Ca.2006. (17)