NATURAL SCIENCE CENTER
OF GREENSBORO
Community Service Through Science

One Good Turn

Program Length: Approximately 45 minutes

Science Presentations

The planetarium show you have scheduled is designed to correlate with the NC Science Standards for third grade students. Objectives 3.01, 3.02, 3.03, and 3.04 dealing primarily with the earth-sun-moon system are clearly demonstrated with experiments and planetarium effects. In addition, students have the opportunity to "meet" selected scientists of historical note whose experiments brought understanding to the previously misunderstood motions of the moon, earth, and sun. Thus, the show is an important lesson in history as well as science. And just for fun, the students' travels through time are led by "Orbit, the Wonder Dog"!

Program Outline

1) Apparent motion: is the sky moving, or are we rotating beneath it?
2) What is the sun's apparent daily motion? How can we use shadows to demonstrate this motion?
3) What is the sun's apparent seasonal motion? What causes seasonal changes in weather and length of daylight?
4) How can shadows tell us the size of planet Earth?
5) Why does the moon change "phases"?

Vocabulary

pole	axis	equator	crescent moon
equinox	solstice	Foucault	apparent motion
full moon	rotation	lunar phases	northern hemisphere
pendulum	constellation	Eratosthenes	southern hemisphere
quarter moon	daily motion	gibbous moon	