



Observatory Park Middle School Programs

Available beginning Spring 2012



GEAUGA PARK
DISTRICT

FROM THE GROUND TO THE GALAXIES
An Educational Adventure

Observatory Park • 10610 Clay Street • Montville Twp. Ohio 44064

Observatory Park

Featuring a 150-person indoor public building with planetarium, separate observatory with 25.5" diameter telescope, 1-mile planetary trail, weather station trail, additional exterior astronomical displays.

Grades 6th-8th

Maximum 75 students (3 classes) per day (Numbers will increase in the future)

Select up to three 45-minute sessions from the menu below to best fit your curriculum needs

Fee: Free for Geauga County schools. \$2 per student per session for Out-of-County schools

*Field Trip funding is available for Geauga County schools through Geauga Park District Foundation.
Contact Emilie for information at 440-279-0835.*

Geology

Soil Science: Working in groups, students use a GPS unit to locate a sample site where they will measure soil temperature, pH, and percolation rate. They will then use a soil bore to get a soil profile and take a soil sample, which they will test for texture and composition.

(6-SI#2, 8-SI#1,3)

Geologic Timeline: Students discover how Earth's history is broken into major units of time by laying out a large geologic timeline. Using math skills, they calculate scale needed, mark periods with flags and place fossil replicas in the correct location.

(8-ESS#11,14, LS#4,5)



GEAUGA PARK
DISTRICT

Observatory Park

FROM THE GROUND TO THE GALAXIES

An Educational Adventure

Meteorology

The Sun: One Hot Topic: Students explore the sun's surface by using various types of solar scopes to look for sun spots, and experiment with solar absorption and reflection using a solar bag, solar shower and the colors black & white. On cloudy days, students experiment with UV beads to determine if the sun still gets through the clouds.

(6-PS#5,7, 7-LS#7, 8-ESS#8)

Solar Energy: Students explore the sun as a source of energy for heat and electricity by discovering how solar cells operate using various solar powered devices and experimenting with a solar oven and solar reflector for heating water and cooking. On cloudy days, experiments with alternative light sources will be substituted.

(6-PS#6,7, 7-PS#3, 8-ST#2)

Weather Station & Forecasting: Working in small groups, students use a variety of instruments (rain gauge, barometer, anemometer, hygrometer, thermometer, sling psychrometer) to collect weather data (cloud type, temperature, wind speed, relative humidity & dew point, precipitation, air pressure). Then they compare results with recordings taken by an on-site weather station. Information is then used to construct a station model. Students can then enter data on GLOBE program.

(6-ST#2,3, SK#2, 7-ESS#5,6, SI#4,5,6,7, 8-SI#1,3)

Academic Content Standard Code

6 – 6th grade

7 – 7th grade

8 – 8th grade

ESS – Earth & Space Science

LS – Life Science

PS – Physical Science

ST – Science & Technology

SI – Scientific Inquiry

refers to specific content standard



Astronomy

Planetary Distance Inquiry: Working in groups, students are given minimal information and must use the inquiry process to determine what data they need to calculate distance and lay out a large scale solar system. Group then walks the mile long planetary trail to discover fun facts about weight, composition, and temperature of the planets.

(6-SI#1,2, 7-SI#4,6, 8-ESS#8,SI#1,4)

Magnification & Telescopes: Students compare magnification with different instruments including naked eye, binoculars, spotting scope, and telescope. Students then compare images of the moon taken with different instruments, compare refracting and reflecting telescopes, visit the large observatory telescope then view Hubble telescope pictures projected on the dome.

(8-ESS#8,SI#4)

Star Life Cycle: Students learn how different stars in the sky are actually phases in the life cycle of stars in an interactive simulation of the life cycle. Students, portraying different star types, then plot out stars by temperature and magnitude to see how they fit in the main sequence on a life-size H-R diagram.

(8-ESS#7)

Additional programs will be added as they become available.