

Bright Futures Academy Magnet Program

Environmental Science

The Environmental Science & Technology Academy at Forest Hill Community High School and the Environmental Research & Field Studies Magnet at **Jupiter High School** meet the needs of students wishing to pursue an academic curriculum with an emphasis on research and environmental studies. Students will explore and evaluate the many challenges related to local, regional and global environments. All students are involved in a learning-through discovery approach, developing research and thinking skills. Field studies, as well as a variety of current technologies, are utilized throughout the programs. Ecosystem restoration, water-related problems, agricultural awareness, field research and sustainability in the 21st century are some of the issues students investigate in this program. **All students applying to these programs must meet the following eligibility criteria: 2.5 GPA and 3 Favorable Teacher Recommendations.**

Jupiter High School FOUR YEAR CURRICULUM*

Freshman Year:

Biology I Honors
Ecology Honors
English I Honors
Health Opportunities through Physical Education

Sophomore Year:

Marine Science Honors
Zoology Honors
English II Honors
World History Hon/AP***

Junior Year:

Plant ID of SFL Ecosystems**
Environmental Conservation**
AP Environmental Science***
Environmental Geology**
Environmental Issues in Horticulture**
Junior Seminar (Enrichment)

Senior Year:

Zoology Honors
GIS/Mapping & Remote Sensing**
Wildlife Ecology**
Executive Internship***
Senior Seminar (Enrichment)
Senior Seminar (Enrichment)

Bright Futures Academy Environmental Science: EDU-Garden

ACADEMIC PROGRAM

Team 1 ONLY

Life Science 6th (as listed in Terms)

Earth Science 7th (as listed in Terms)

Biology 8th (as listed in Terms)

Team 1 & Team 2

Research Skills 1-3

- 1- Research Skills(Animal Behavior)
- 2- Botany (Plants, Etymology, Field to Table)
- 3- Ecology (Soil, Weather, Aqua-Culture)

COMMUNITY SERVICE PROGRAM

Beach Clean Up

Partnership with Mounts

Partnership with MacArthur State Park

Community Food Bank

FIELD TRIPS

Daily Schedule

Team 1 7th/8th Grade: 1st and 2nd Period M-F

Team 2 7th/8th Grade: 2nd Period M-F

Team 1 5th/6th Grade: 9th and 10th Period M-F

Team 2 5th/6th Grade: 10th Period M-F

Team 1 Academic Classes: Tests to be given regularly

5th & 6th Grade Students in Team 1 are expected to meet the academic rigors of the courses listed above. Class time will be held M-T-W and additional Garden time will be held on R/F in most cases.

7th & 8th Grade Student in Team 1 are expected to meet the academic rigors of the courses listed above. Class time will be held W-R-F and additional Garden time will be held on M/T in most cases.

These days were selected based on additional student rotations from K-4 classes and 5-8 science class rotations.

The EDU-Garden teaching team is responsible for direct instruction.

Team 2 Center Rotation

Research Skills Class: Quiz to be given at the end of each week rotation.

Each Team will be divided further into 7 groups (ROYGBIV) that will rotate through garden centers each week. The Garden Centers are as follows:

Animal Behavioral Science: Includes cleaning and care for animals; Observing and charting/graphing animal behavior; the study of genetics; Animal Psychology.

Plants & Propagation: Includes planting, propagation and harvesting of plants; in depth understanding of plant cell biology, Photosynthesis, Plant Diversity and Ecosystems.

Entomology: Includes the study of insects, spiders, slugs (all invertebrates encountered in the garden) Bug Scope, Pesticides, Good Bug-Bad Bug, Parasites, and Invertebrate Biology.

Soil Science: Includes soil erosion, soil composition, crop rotation, types of rocks, PH levels, Nitrogen cycle, and composting.

Weather: Includes the water cycle, water composition, sun exposure, oxygen cycle, clouds, green-house effect, wind and ocean currents.

Aqua-Culture: Includes ichthyology, fishing as a food industry, oxygen in water, pond ecology, study of amphibians & reptiles, and symbiosis.

Field to Table: Includes food preparation, cleaning vegetables, how to set a table, measurement, cutting, cooking, presentation and nutrition.

During weeks 8 and 9 student teams will write a book, geared toward K-4th grade students, from 1 of each of the 7 categories listed above. This will comprise a final grade worth a substantial percentage of the total for the nine weeks. The books need not be illustrated; illustrations will be completed through the art department.

The EDU-Garden teaching team is responsible for preparing activities for each of the above mentioned rotations. Please keep in mind that the students should stay in each rotation for the entire week.