

LAKE HIGHLAND

# ASPIRE RESEARCH PROGRAM

Advanced Science Program emphasizing Internships & Research Experiences

ASPIRE matches highly motivated science and math students in the Upper School with leading researchers and professionals at research facilities in Central Florida. Students actively participate in authentic scientific studies and research under the direction of their mentors, gaining first-hand analytical and research skills comparable to those offered in many undergraduate and graduate level college programs. These in-depth scientific studies have resulted in scientific discoveries, in co-authoring articles in professional science journals and in presentations to scientific panels. Lake Highland's uniquely skilled and highly qualified ASPIRE students win a significant number of top awards each year in local, regional, national and international competitions including ISEF.



LAKE HIGHLAND  
PREPARATORY SCHOOL



WWW.LHPS.ORG  
901 NORTH HIGHLAND AVENUE  
ORLANDO, FL 32803

## SCIENCE & MATH AT LAKE HIGHLAND



**LOWER SCHOOL: GRADES PK-6**

**CURRICULUM AND INSTRUCTION:**

- Full science lab including computer lab
- PK-2 science units taught by classroom teachers
- Math procedural skills
- Math facts accuracy & fluency
- Manipulatives & discovery
- Mathematical thinking & problem solving
- 3rd-6th grades: differentiated math levels-standard, advanced, accelerated
- 6th grade: 4 math levels including Pre-algebra Honors
- 3rd-6th grades science lab class & daily classroom science
- 6th grade elective science class taught by science specialist
- 6th grade Research Requirement-Science Forum

**FIELD TRIPS RELATED TO CURRICULUM:**

- Ponce de Leon Inlet
- Sea World
- Gatorland
- Wakulla Springs
- Tallahassee Natural History Museum
- EPCOT Living Seas, Land & Seas

**CLUBS AND CO-CURRICULAR SCIENCE & MATH OFFERINGS:**

- Orange County Math Competition
- Robotics Academy
- Florida Math League Competition
- Environmental Club
- 6th Grade-working vegetable garden on campus!
- Einstein Club – 5th and 6th girls
- Lego Robotics Club
- Odyssey of the Mind
- Future Problem Solving Club
- Science Academy after school
- Summer science & math enrichment classes in *Summer Spectacular*

**SCIENCE CURRICULUM SPECIALIST PK-6**



**MIDDLE SCHOOL: GRADES 7-8**

**CURRICULUM AND INSTRUCTION:**

- 4 fully equipped science labs
- 7th grade Earth Science class
- 8th grade Physical Science class
- Math 7, Pre-algebra 7, Pre-algebra Honors
- Introduction to Algebra, Algebra I, Algebra I Honors
- Geometry Honors
- Life Management Skills class
- Robotics class-elective

**CO-CURRICULAR ACTIVITIES, COMPETITIONS & CLUBS:**

- Orange County Math Competition
- American Middle School Math Exam (AMC8)
- Florida Math League Competition
- MATHCOUNTS
- Young Naturalist Essay Competition
- Green Club
- Funky Science Club
- Future Problem Solvers
- Summer science & math enrichment classes in *Summer Spectacular*



**UPPER SCHOOL: GRADES 9-12**

**CURRICULUM AND INSTRUCTION:**

- 10 fully equipped science labs
- Course offerings:
  - Biology, Chemistry, Physics, Introduction to Chemistry & Physics
  - AP Biology, AP Chemistry, AP Physics, AP Environmental Science
  - Forensic Science, Engineering, Biotechnology
  - Anatomy & Physiology, Marine Biology, Environmental Science
  - Algebra I, Algebra II, Algebra II Honors
  - Geometry, Geometry Honors, Advanced Topics in Math
  - Trigonometry & Introduction to Statistics
  - Pre-calculus, Pre-calculus Honors, Calculus Honors
  - AP Calculus AB, AP Calculus BC, AP Statistics

**\*ASPIRE-Advanced Science Program Research & Internship Experiences**

- 9th grade Research Requirement-Orange County Science Fair or Young Naturalist Research Essay
- Summer course offerings in *Summer Spectacular*:
  - Pre-AP Biology Institute, Pre-AP Chemistry Institute,
  - Advanced Marine Research & Field Study

**FIELD TRIPS RELATED TO CURRICULUM:**

- UF Medical School, Shands Teaching Hospital, Biotechnology Lab
- King's Bay manatee swim
- Discovery Cove dolphin swim
- Busch Gardens-the physics of roller coasters
- Lockheed Martin-National Engineering week
- Environmental Assessment of Orlando Watershed EAOW

**CO-CURRICULAR ACTIVITIES, COMPETITIONS & CLUBS:**

- Mu Alpha Theta (Math Honor Society)
- Math League Contest
- American High School Math Exam (AMC12)
- Orange County Super Bowl High School Math Contest
- University of Florida Science Symposium
- Orlando Science Center Ying Science Challenge
- State Science Fair
- ISEF International Science & Engineering Fair
- I-SWEEP International Environmental Olympiad
- Envirothon competition
- Siemens Competition and Intel Talent Search
- Pre-Med Club & Lecture Series
- Bio Club
- Aquarium Association

**\*ASPIRE** matches highly motivated LHPS students with leading researchers and doctors in Central Florida. See back of brochure for full description of this award winning experience.

