The Advanced Science Program emphasizing Internships & Research Experiences (or ASPIRE) is a unique and collaborative tradition of excellence at Lake Highland. Accelerated Upper School math and science students are matched with leading researchers at laboratories throughout Central Florida. These highly motivated students learn from industry experts and mentors, work with undergraduate and graduate students, and utilize the latest technology and equipment as they pursue unprecedented scientific achievements. ASPIRE students and their sophisticated multi-year research projects consistently win state, national, and international competitions.

ASPIRE Students:
- Participate in scientific discoveries
- Co-author articles in professional journals
- Present discoveries to expert panels for review
- Finish with top honors in local, state, regional, national, and international science competitions
- Receive scholarships to the schools of their choice

Distinctive Upper School Program Matches Advanced Science Students with Research Mentors

### CONTACT
- **PHONE**
  - 407.206.1900
- **WWW.**
  - LHPS.ORG
- **FAX**
  - 407.206.1933

Providing Distinctive STEM Programs from PreK – 12th Grade

### THE ELEMENTS OF SUCCESS

#### INNOVATION INSTITUTE
Central Florida’s School of Opportunity

Our Middle School Provides Cutting-Edge STEM Programming

- Featuring advanced classes and electives, Lake Highland’s Innovation Institute delivers high-quality STEM learning for 7th- and 8th-grade students. Through project-based courses, students investigate a variety of STEM disciplines, including aeronautics, robotics, technology, and computer science. The Innovation Institute is led by creative teachers who combine their industry expertise with engaging classroom instruction.

#### 7th-Grade Courses include:
- Automation & Robotics
- Design & Modeling
- Introduction to Computer Science

#### 8th-Grade Electives include:
- Energy & the Environment
- Flight & Space
- Science of Technology
- Design & Modeling 8
- Green Architecture
- Magic of Electrons
- Medical Detectives
- iStudio
- FIRST Lego League Robotics Team (FLL)
IGNITING CURIOSITY
GRADES PK-6

CURRICULUM & INSTRUCTION
Daily science classroom instruction and cross-curricular projects
2 Science Laboratories
2 Faculty Science Specialists
Makerspaces
Teaching garden
Mathematics instruction designed to develop concepts, processes, attitudes, and metacognition
3 Levels of math in 4th-6th grades: standard, advanced, and accelerated
4 Levels of math offered in 6th grade, including Pre-Algebra
Computer programming – Minecraft
Learning that fosters creativity, innovation, collaboration, and perseverance
Summer science programs

CLUBS & ACTIVITIES
Einstein Girls in 5th-6th grades
Future Problem Solvers
iPadography
Lego Robotics
Math Enrichment
Odyssey of the Mind
Zoology

STEM FIELD TRIPS
Blue Springs
EPOTY
Gatorland, Green Meadows Farm
Kennedy Space Center
Leu Gardens, SeaWorld, Orange County Landllll
Ponce Inlet
Strawberry Farm, Lukas Nursery, Animal Kingdom
Tallahassee: Museums & Wakulla Springs
Washington, D.C., Smithsonian Institution

INSPIRING INNOVATION
GRADES 7-8

CURRICULUM & INSTRUCTION
4 Science Laboratories
MATH: Math 7, Pre-Algebra 7, Pre-Algebra Honors, Intro to Algebra, Algebra I, Algebra I Honors, Geometry Honors
Summer Science & Math Enrichment Classes
7th-Grade Space Week: Culminating in moon and planet gazing with high-powered telescopes
8th-Grade May’n Attraction: Designing a theme park

CLUBS & ACTIVITIES
American Middle School Math Competition (AMC8)
Florida Math League Competition
Future Problem Solvers
iPodography
Lego Robotics
Math Enrichment
Odyssey of the Mind
Zoology

STEM FIELD TRIPS
Circle F Dude Ranch
Emil Boehringer Panorama at Seminole State College

FOSTERING DISCOVERY
GRADES 9-12

CURRICULUM & INSTRUCTION
COLLEGE PREP & HONORS COURSES
SCIENCE: Biology, Introduction to Chemistry & Physics, Chemistry, Physics, Forensic Science, Engineering, Anatomy & Physiology, Marine Biology, Robotics I & II, Environmental Science, Advanced Science Program emphasizing Internship & Research Experiences (ASPIRE)
10 Science Laboratories
9th-Grade Science Research Requirement

Advanced Placement Courses

SUMMER COURSES
Summer Pre-AP Biology Institute, Marine and Coastal Science, Intro to Computer Programming, Robotics & Engineering Research & Development, Medicine & Biotechnology

STEM FIELD TRIPS
Lockheed Martin National Engineering Week
King’s Bay Manatee Swim

CLUBS & ACTIVITIES
American High School Math Competition (AMC 10 & 12)
Engineer Encounters
Environmental Club
FIRST Tech Challenge Robotics Teams (FTC)
Genius Olympiad
Google Science Fair
Intel International Science & Engineering Fair (ISEF)
International Science Energy, Engineering, & Environment Program (I-SWEEEP)
Math League Contest
Mu Alpha Theta (Math Honor Society)
Orange County Super Bowl High School Math Contest
Orlando Science Center Science Challenge
Pre-Med Club & Lecture Series
Science Olympiad
Science Talent Search
Siemens Competition & Intel Talent Search
University of Florida Junior Science & Humanities Symposium
Water for the World
Women in STEM
Ying Scholar Prize

BEYOND THE CLASSROOM
(PreK-12)
Animal Kingdom – Purple Martin Research
Florida Hospital East – Medical Simulation Lab
Global Robotics Institute – Robotic Surgery
UCF College of Medicine – Emergency Medical Care
Florida Interactive Entertainment Academy (FIEA) – Animation & Virtual Reality

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