LONG BEACH SCHOOLS
ENRICHMENT PROGRAMS
ENRICHMENT IN OUR ELEMENTARY SCHOOLS

LARC & SPIRIT PROGRAMS

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WHAT IS THE LARC PROGRAM?

• Learning Activities to Raise Creativity
• The district’s gifted and talented program
• Open to students based on performance on a set of standardized tests administered in second grade
• Designed to meet unique learning needs of these students
• One full day per cycle in grades 3 through 5
GOALS OF THE LARC PROGRAM

• Critical Thinking
• Problem Solving
• Creativity
• Group Process
TAUGHT THROUGH THEMATIC UNITS OF INQUIRY & ESSENTIAL QUESTIONS

- Grade 3: The Renaissance
  - How does the Renaissance symbolize the transition from the medieval world to a more modern age?
- Grade 4: Rocketry and Space Exploration
  - Has mankind progressed or profited in any way as a result of our moon exploration?

Grade 5: Genetics, DNA, and Forensic Science
  - How does the study of genetics affect people’s lives?
OTHER OPPORTUNITIES WITHIN THE LARC PROGRAM

• Word Masters – nationwide vocabulary competition
• Kids Philosophy Slam – national competition with this year’s theme of: “Imagination or Knowledge: Which has a greater impact on society?”
• STEM Challenge Unit – blend physics, math, and creativity to solve a problem in a team atmosphere
• Performing Arts Team Challenges
• Speech & Debate (5th grade)
WHAT IS THE SPIRIT PROGRAM?

• Specialized Program Integrating Research, IB Principles, and 21st Century Technology

• An “enrichment for all” program to allow all our students opportunities to engage in inquiry, problem solving, and real world application

• An “information literacy” program that replaced the traditional “library” program for grades 3-5
GOALS OF THE SPIRIT PROGRAM

• Become familiar with and mindful of the IB learner profile
• Follow an inquiry-based process to indulge curiosities and creativity
• Implement Google Apps for Education in their project-based learning
TAUGHT THROUGH UNITS OF INQUIRY

• **Unit 1:** Team Building with the IB Learner Profile
  
  • *Key Concept:* reflection
  
  • *Enduring Understanding:* reflection on the individual IB learner profile traits can develop teamwork skills

• *Lines of Inquiry:*
  
  • IB profile traits
  
  • IB profile strengths and areas for growth
  
  • Working as a team
TAUGHT THROUGH UNITS OF INQUIRY (CONT’D)

• **Unit 2:** International-Mindedness and 21st Century Research Skills
  
  • *Key Concepts:* connection, reflection
  
  • *Enduring Understanding:* research helps us explore new knowledge that can lead to international-mindedness
  
  • *Lines of Inquiry:*
    
    • International-mindedness
    
    • Digital citizenship
    
    • Website validity and reliability
    
    • Plagiarism – APA format for citations
• **Unit 3:** Grade Level Specific Research and Project
  - *Grade 3:* “A Culture Quest”
    - students create a Prezi presenting learning about a culture other than their own
    - focus on open-minded learners
  - *Grade 4:* “S.O.S. (Save Our Species)”
    - students create a group blog about an endangered species
    - focus on principled learners
  - *Grade 5:* “The Ocean Speaks”
    - students create web sites about stewardship of our oceans and their resources
    - focus on inquirers – develop own central research question
OTHER OPPORTUNITIES WITHIN THE SPIRIT PROGRAM

• Team Challenges – mirror activities in the LARC program but with greater differentiation for diverse learners
• IB Learner Profile – prepares students for the thinking and learning expected of them in the MYP at the middle school
• STEM Team Challenges – as above
• Project-Based Learning in Teams
LONG BEACH SCHOOLS
SCIENCE RESEARCH PROGRAM

HIGH SCHOOL: MR. ONUFROCK, MR. LERNER, MS. BLOOM, MS. HALL, MS. TORNABENE
MIDDLE SCHOOL SCIENCE CLUB: MS. KALNER, MR. GLASSTEIN
DR. DEBORAH LOVRICH, DIRECTOR OF STEM 6-12
LONG BEACH MIDDLE SCHOOL PROGRAM

• All students engage in research for our Science Symposium, in line with IB MYP
• Long Island Science Congress (About 20 students total) - Highest Honor and 2nd place in Physical Science, Highest Honor and States, High Honors-2 (Excludes 2013)
LONG BEACH HIGH SCHOOL SCIENCE RESEARCH COURSES FOR ALL STUDENTS

**Science Research I**
- Research and critique journal articles
- Enhance observation skills
- Experimental skills are broadened

- Explore the engineering process
- Enhance presentation skills
- Design first high school experiment!
Science Research Year I Enrollment

Number of Students

Academic Year

10-11 11-12 12-13 13-14 14-15 15-16
SCIENCE RESEARCH II

LESS TEACHER DIRECTION; MORE STUDENT INITIATIVE

• Research targeted scientific journals
• Formulate problem
• Learn new experimental procedures
• Engineer devices
• Analyze data more critically
• Presentation skills - PowerPoint, public speaking
• Prepare for Science Research Competition!
SCIENCE RESEARCH III AND IV
STUDENT-DRIVEN WITH MENTOR HELP

• Explore deeper or in a new direction
• Complexity in experimentation
• Work at the high school or at local institutions and universities
• Professional mentors
SCIENCE RESEARCH COURSE ENROLLMENT
TWO-YEAR AVERAGES

Two-Year Average

10-12  12-14  14-16

Academic Years
SCIENCE COMPETITIONS

• Long Island/New York State/International Science and Engineering Fair
• Long Island Science Congress
• NSF Robert Noyce Symposium
• MOLLOY COLLEGE
• Siemens Competition in Math, Science and Technology
• Intel Science Talent Search
• Junior Science and Humanities Symposium
• I-SWEEP - International Sustainable World Energy, Engineering, Environment Project Olympiad
Science Research Project Awards 2013-2015

- **Long Island Science and Engineering Fair-Intel Division**
  - 1st Animal Science; 2ND Environmental, Plant Science; 3rd Environmental Management (2); 4th Medicine; Honorable mention (3)
  - Women Geoscientists Award; The Yale Science and Engineering Association; Stockholm Junior Water Prize (2)

- **New York State Science and Engineering Fair**
  - 1st plant Science; 2nd Microbiology, Environmental, 3rd Medicine and Health, Environmental Management, Honorable Mention (4)
  - NOAA “Taking the Pulse of the Planet” Award, Stockholm Junior Water Prize, Genius Olympiad Award
FUTURE DIRECTIONS
BROOKHAVEN NATIONAL LABORATORIES
Ascertaining the Correlation Among *Ilyanassa obsoleta* Size and *Pleurogonius malaclemys* Presence
QUESTIONS?

Thank you