Spring Parent & Student Orientation & Registration (2023)

https://chiprep.org

Saturday, February 18, 2023
9:00 a.m. - 11:30 a.m.
Kenneth Hill, CEO & President ChiS&E

Overview of ChiS&E

- Overview of the Chicago Pre-College Science & Engineering Program (ChiS&E)
- ChiS&E Innovative & Technology
  – “Young Aerospace Engineers”
  - Relationship with Universities
  - Parent Engagement

Chicago Pre-College Science & Engineering Program (ChiS&E)

The Chicago Pre-College Science and Engineering Program (ChiS&E) provides highly-engaging, age-appropriate hands-on science and engineering activities for Chicago Public School (CPS) K-12 students and their parents. The program develops student and parent knowledge as well as a love of learning in areas of science, technology, engineering and mathematics.

Chicago Pre-College Science & Engineering Program Goals

- To raise community awareness about the importance of student success in science and mathematics.
- To illuminate pathways to careers in science, technology, engineering and math (STEM) professions.
- To inspire passion for science and math through hands-on activities that make engineering come alive.
- To equip parents to provide supportive STEM-related learning experiences for their children.
- To highlight professional role models within the African American and Latino engineering community.

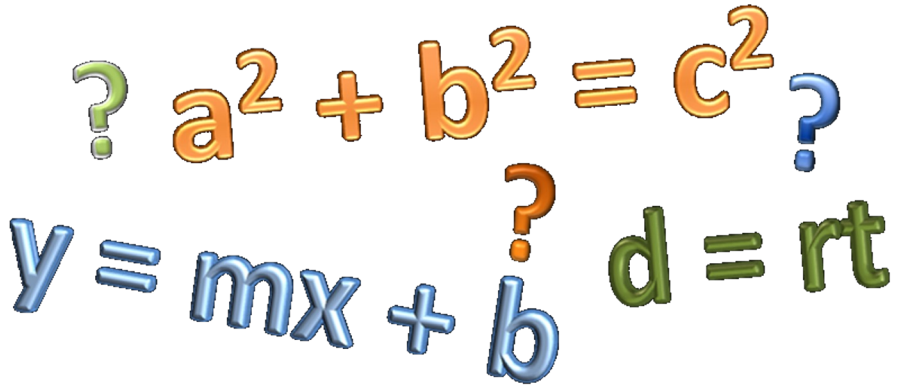
Our Goal

ChiS&E Chicago Pre-College Science and Engineering Program

To prepare our students to be:

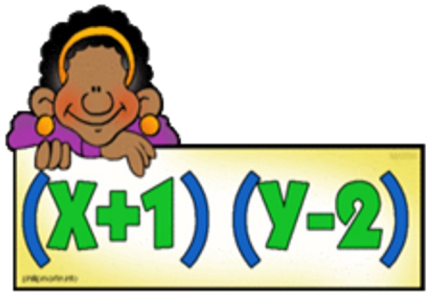
➔ Algebra Ready by Grade 8

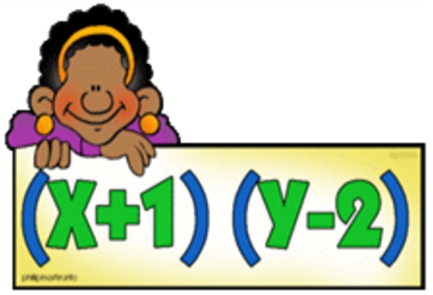
➔ Calculus ready by High School



Why Algebra & Calculus?

- ACT connection
- Algebra is present on math placement exams for college
- Calculus is necessary for Engineering and science degrees





ChiS&E Chicago Pre-College Science and Engineering Program

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ChiS&E Alumni

Class of 2022

Angelease Bunton - Spelman College

Major: Pre-Med

ChiS&E Alumni

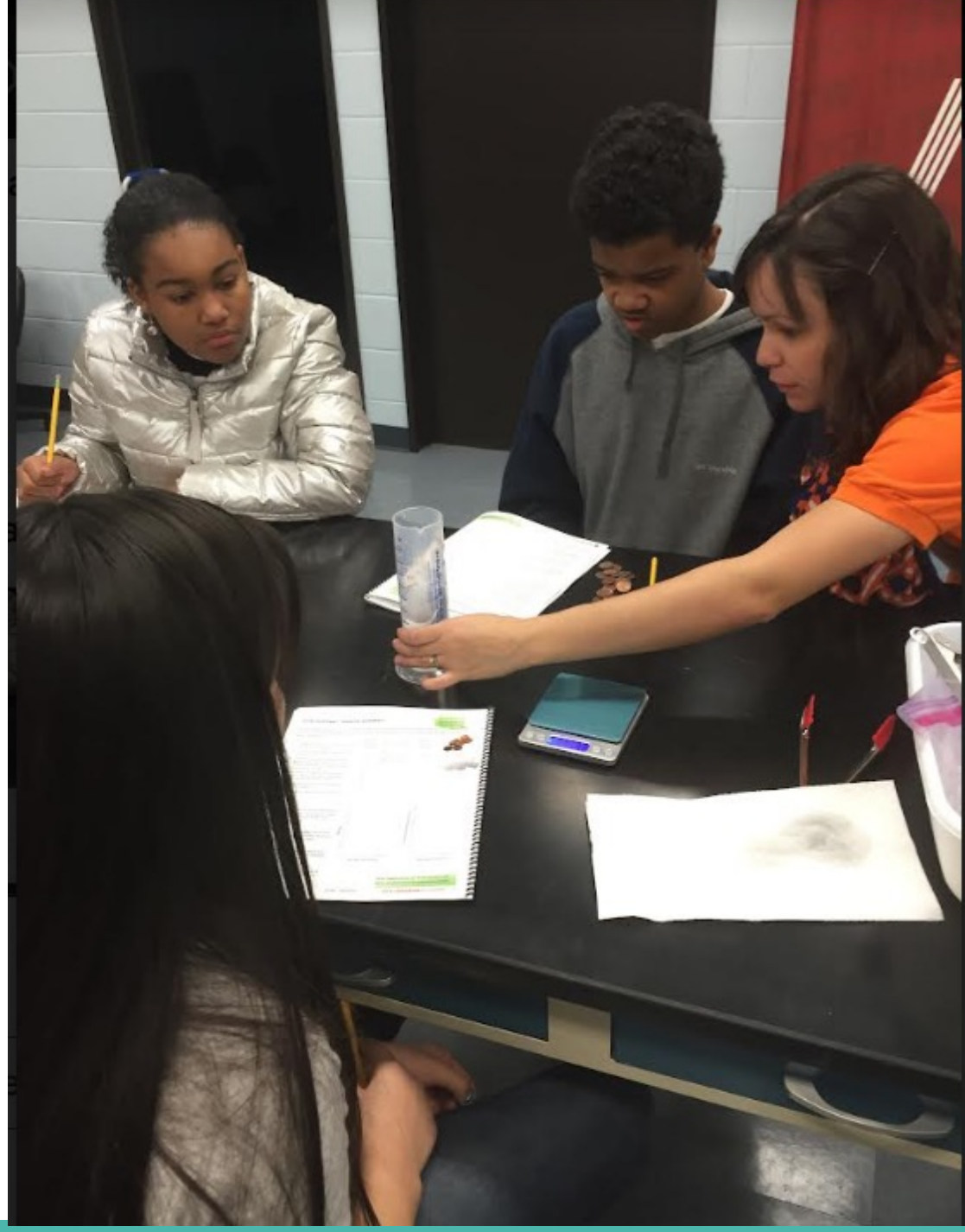
Class of 2022

Xavier Glanz

1st ChiS&E Class
"7th grade Physics"

University of Illinois of Chicago (UIC)

Major: Physics!



How do we do it?

ChiS&E Chicago Pre-College Science and Engineering Program

- ★ Provide hands-on, **activity-based instruction** in science and engineering to parents and students in Grades K-5.
- ★ Create and inspire in both student and parent a **quest for math, science and technology education** and experiences beyond the K-3 grade levels.
- ★ **Expose** parents and students to science and engineering facilities in their communities via field trips and instructional classes in these locations
- ★ Provide parents and students opportunities to meet African American, Latino, and other **scientists and engineers**.
- ★ **Provide teacher training** for elementary school teachers who will teach the K-12 pre-engineering curriculum to parents and students

Engineering Curriculum Pathway

K – Little Civil Engineer (+ Algebra Concepts)

1st – Little Chemical Engineer (+ Algebra Concepts)

2nd – Little Electrical Engineer (+ Algebra Concepts)

3rd – Little Mechanical Engineer (+ Algebra Concepts)

4th – Little Structural Engineer (bridge building)

5th – 8th Young Aerospace Engineers (Rockets & Drones) **Summer Series**

5th – Young Mathematicians (geometry)

6th – Young Mathematicians (geometry)

7th – Young Physicist's (physics & algebra)

8th – Young Computer Scientists (Computer Coding & Robotics)

8th – Young Chemical Engineers (Chemistry & Bioengineering) Young Biologists (Biology)

9th & 10th Young Engineers (Algebra Topics for Calculus)

9th & 10th – Advanced Robotics

11th & 12th - Rocketry

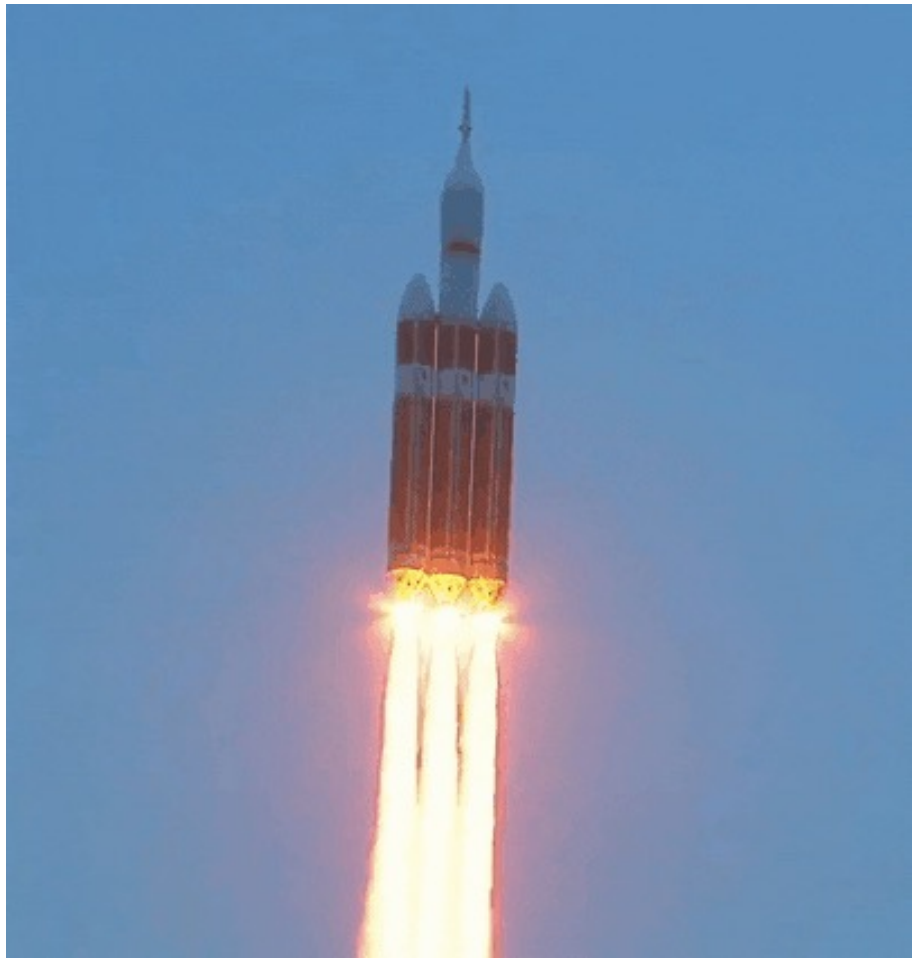
11th & 12th - Electrical Engineering & Robotics

ChiS&E Innovation & Technology

Grade: Rising 5th-8th (Current 4th – 7th)
"Young Aerospace Engineers"

- NASA Rocketry
- Drone Technology
- Parents as partners

Ingenuity
NASA Helicopter
currently on Mars



SLS (Space Launch System)
World's most powerful rocket!
Image Credit: NASA

Perseverance Rover
currently on Mars