

Rye Neck Schools

Learn Achieve Lead

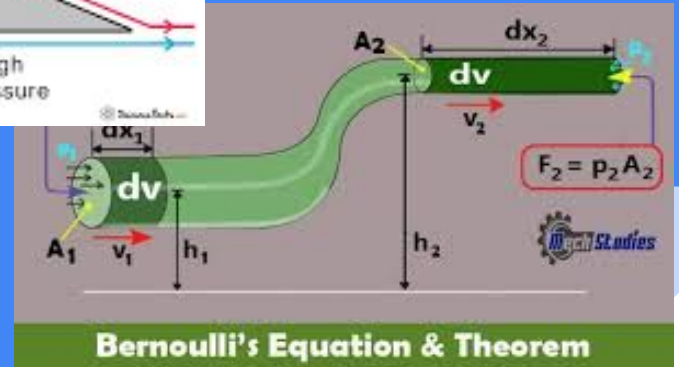
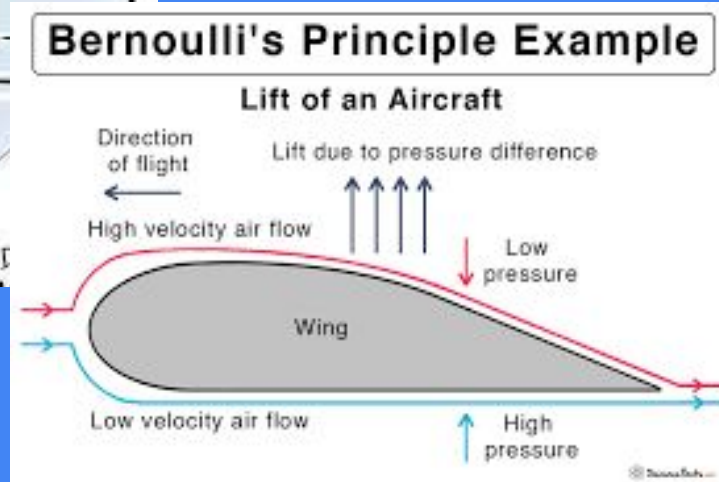
Science Department

Presentation to the Board of Education
December 21, 2022

Building for the
Next Generation



How do planes fly?



Bernoulli's Equation & Theorem

So much information!

How do we provide the tools to:

Understand

Decide

Evaluate

Apply



Next Generation Science Standards and NY State Science Learning Standards

Provide a new framework
for ongoing learning

Focus on:

Broad concepts and
professional practices for
gathering and applying knowledge



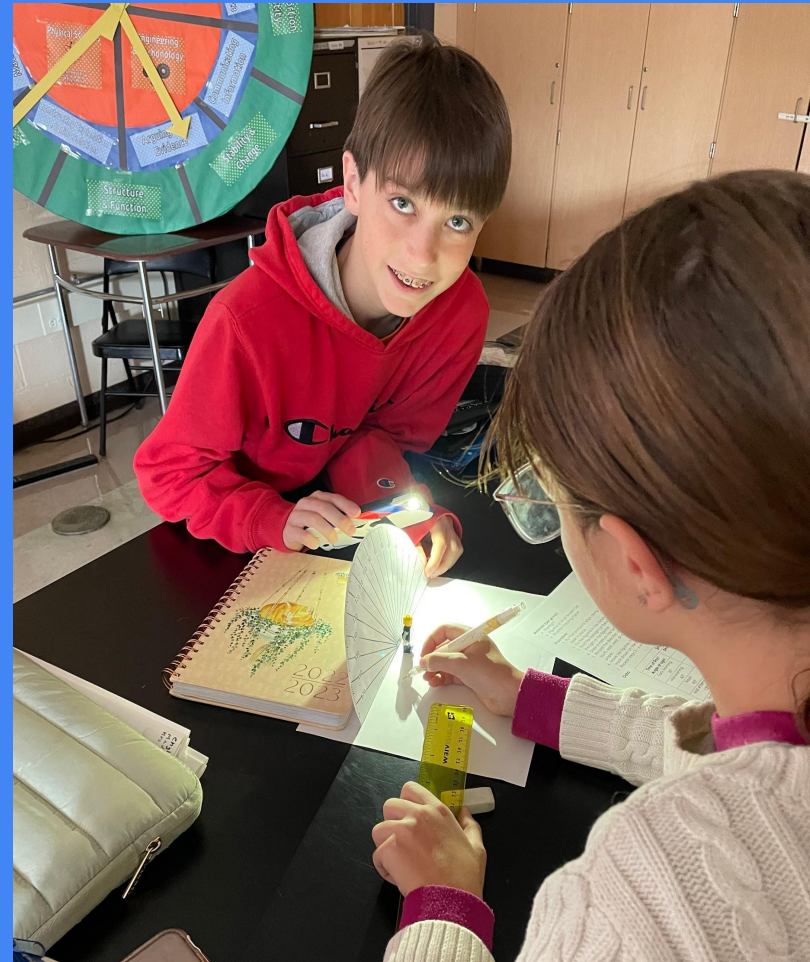
“what
students
do”



“what
students
know”

“how
students
think”

Quoted text from Peter A'Hearn



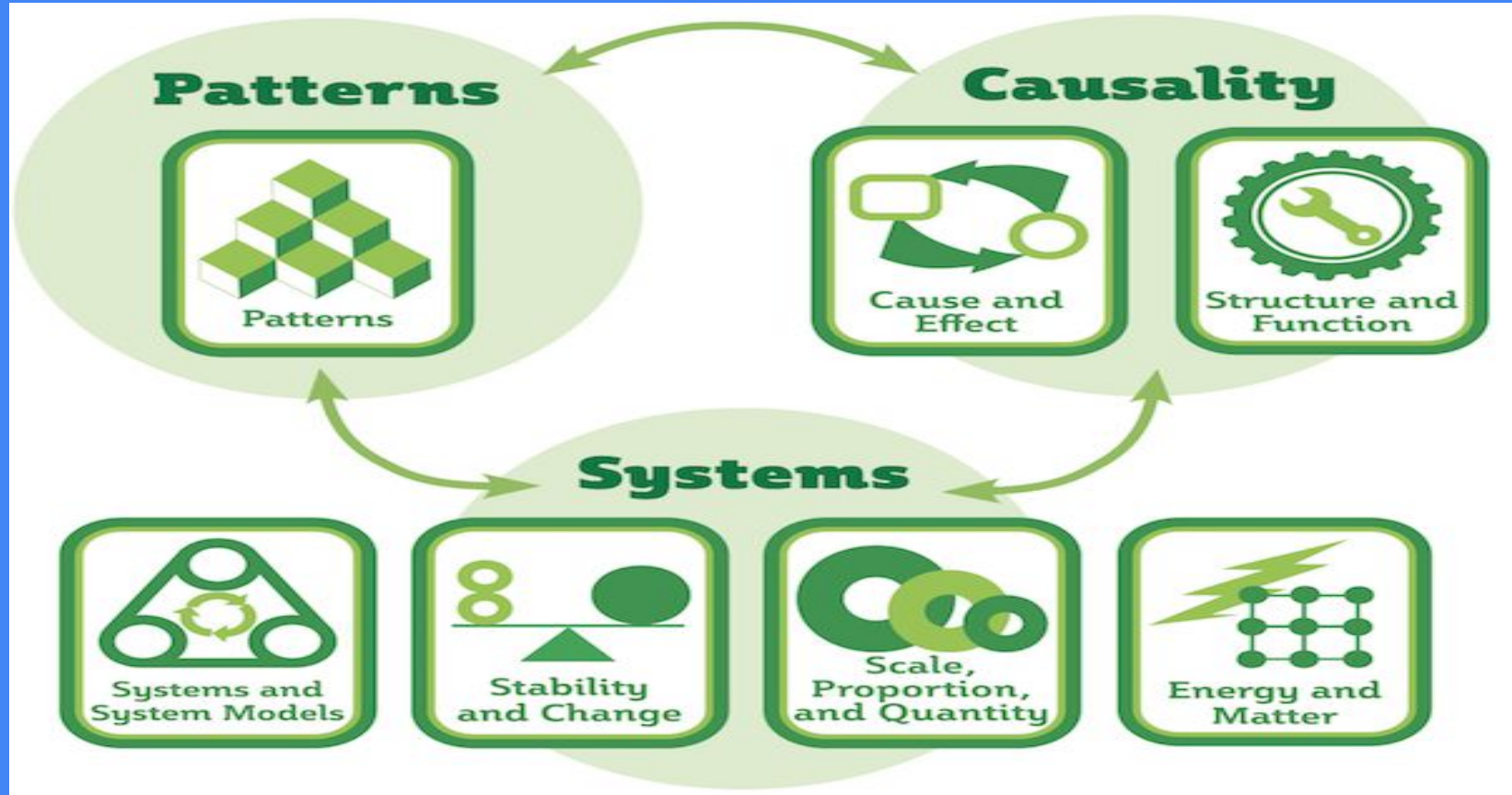
Core Ideas

Disciplinary Core Ideas

NGSS@NSTA
STEM STARTS HERE

| Life Science | Physical Science |
|--|--|
| <p>LS1: From Molecules to Organisms: Structures and Processes</p> <p>LS2: Ecosystems: Interactions, Energy, and Dynamics</p> <p>LS3: Heredity: Inheritance and Variation of Traits</p> <p>LS4: Biological Evolution: Unity and Diversity</p> | <p>PS1: Matter and Its Interactions</p> <p>PS2: Motion and Stability: Forces and Interactions</p> <p>PS3: Energy</p> <p>PS4: Waves and Their Applications in Technologies for Information Transfer</p> |
| Earth & Space Science | Engineering & Technology |
| <p>ESS1: Earth's Place in the Universe</p> <p>ESS2: Earth's Systems</p> <p>ESS3: Earth and Human Activity</p> | <p>ETS1: Engineering Design</p> <p>ETS2: Links Among Engineering, Technology, Science, and Society</p> |

Crosscutting Concepts



Science and Engineering Practices



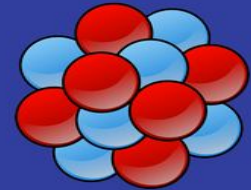
**Asking Questions
and Defining
Problems**



**Planning and
Carrying Out
Investigations**



**Analyzing and
Interpreting Data**



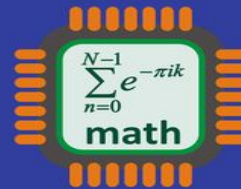
**Developing and
Using Models**



**Constructing
Explanations and
Designing Solutions**



**Engaging in
Argument from
Evidence**

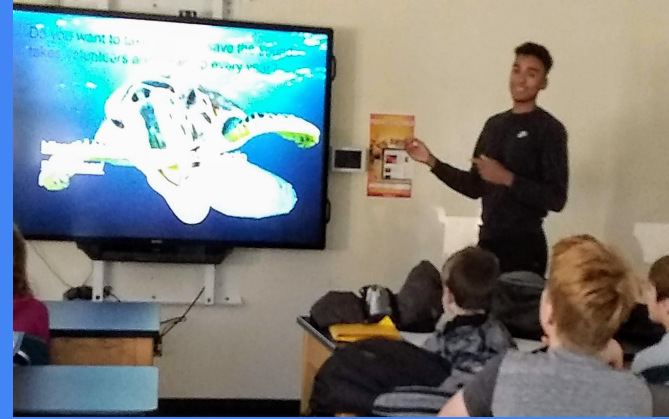


**Using Mathematics
and Computational
Thinking**



**Obtaining, Evaluating
and Communicating
Information**

How does our space facilitate learning?



Then



Then



Now



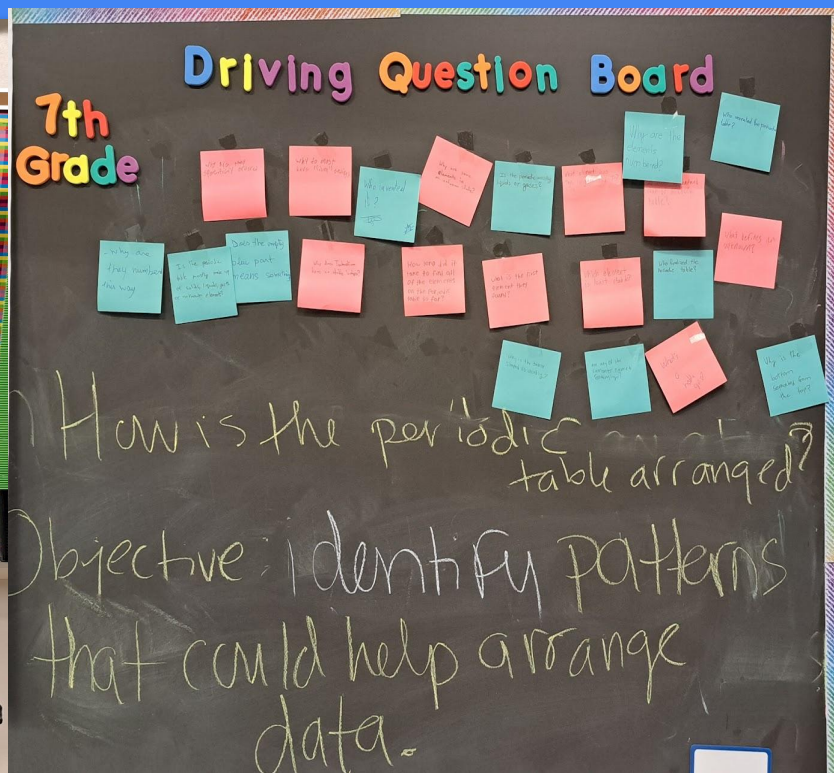
Then

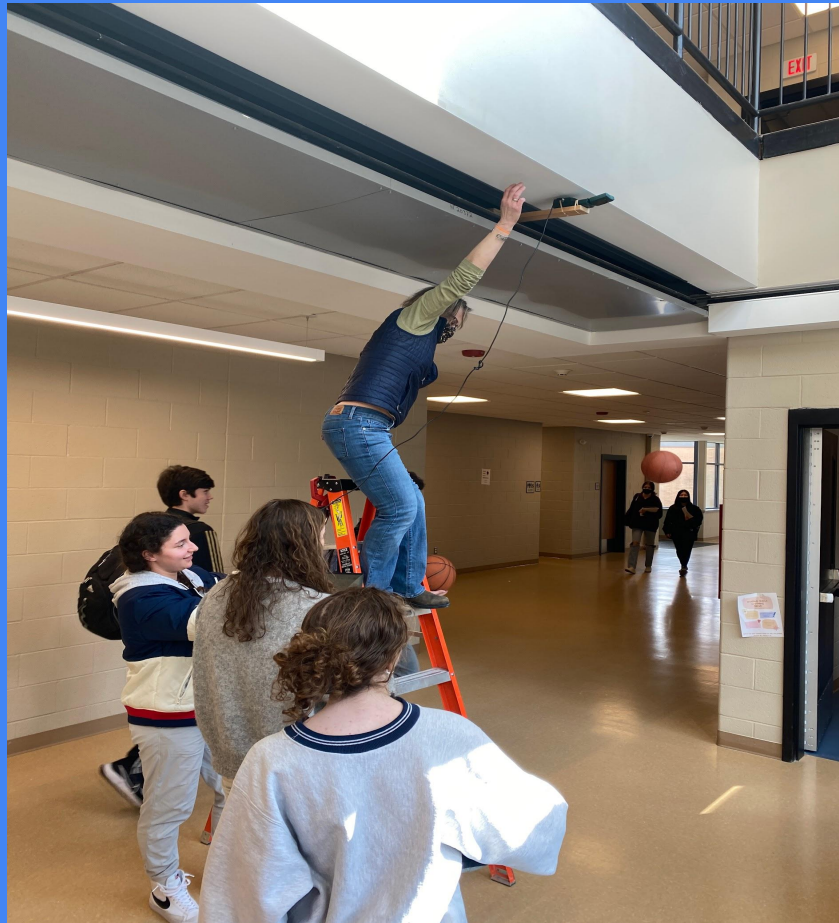


Now



Asking Questions and Defining Problems



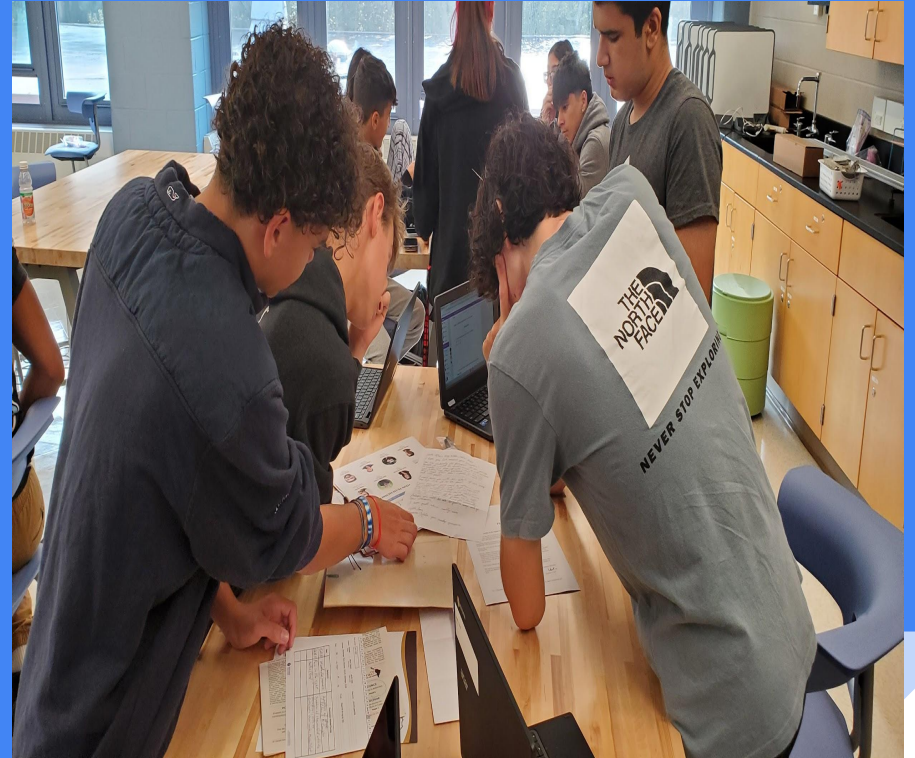


Planning and Carrying Out Investigations





Analyzing and Interpreting Data





Examples of Modern Technology

- EKG Sensor
- Amscope Microscope Camera
- Backyard Brains EMG SpikerBox
- O₂ Sensor
- CO₂ Sensor
- Vernier Graphical Analysis
- Vernier Spectral Analysis

Collaboration

- Science and ILP Symposium
- Clubs
- Competitions
- Board of Education Meetings

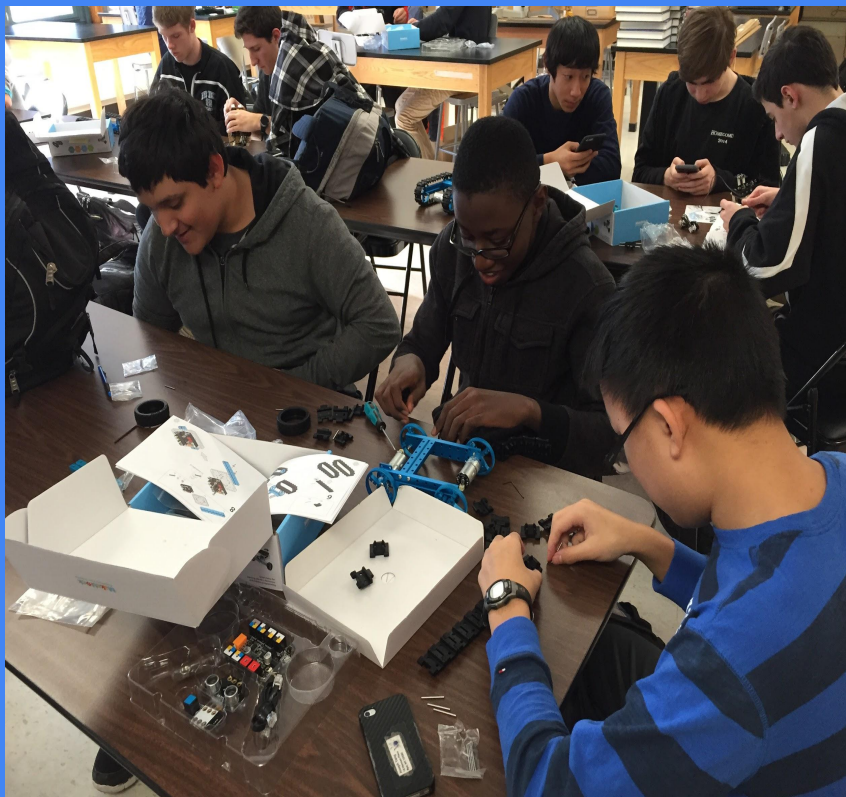


hosa future
health
professionals
RYE NECK HOSA
CHAPTER #17031





Then



Now



What will the next generation do?



What will the next generation do?







