Science and Technology / Engineering

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K-8 STE Curriculum Coordinator
School Committee Presentation
May 8th, 2023

NEWTON
PUBLIC SCHOOLS
Equity & Excellence

2016
Science and Technology / Engineering Framework

Framework Shifts

- Analyze and explain scientific phenomena
- Focus on conceptual understanding
- Integrate science practices and engineering
- Apply understanding to real world problems
- Build science core ideas and practices, K-8

NPS STE Implications

- Reconfigure our sequence of science core ideas
- Embed a purposeful progression of science practices and engineering
- Embrace a pedagogical shift to support student understanding and engagement

NPS
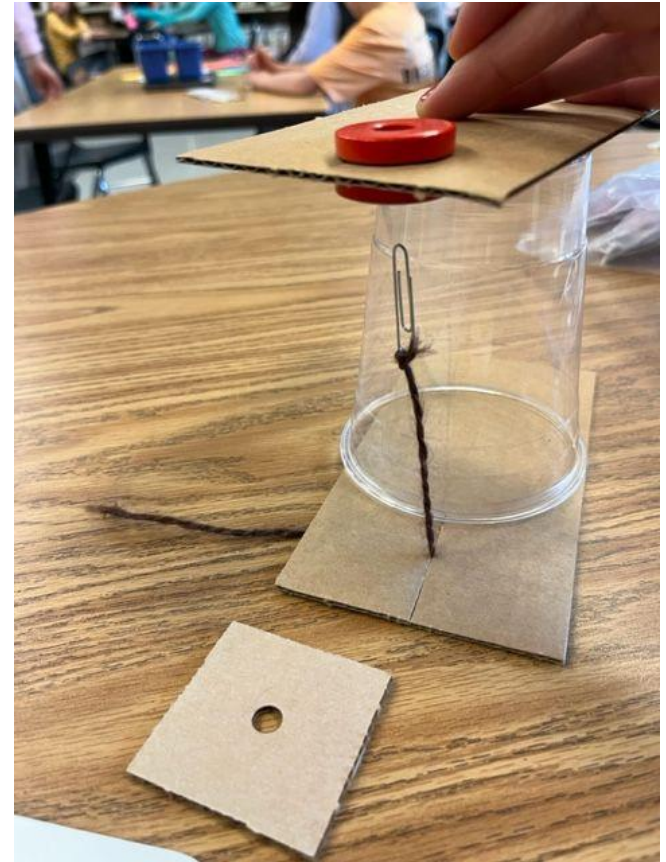
STE Framework Shifts and NPS Goals

Changes to the Science and Technology / Engineering framework
necessitate reworking science curriculum and instruction
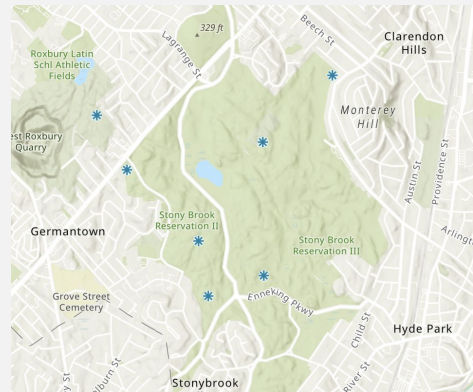and support our NPS Goals of Academic Excellence and Educational Equity.

Complex Science Phenomena

Language Development
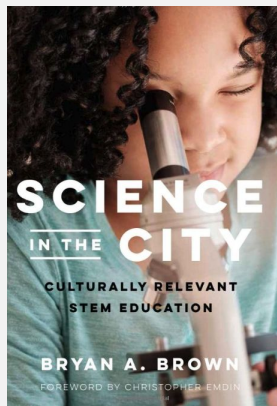
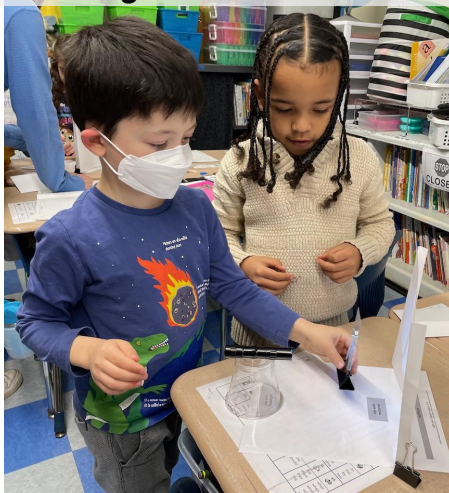
Community Connection

2015-2023
K-8 Curriculum Updates

Science and Technology / Engineering

|	2015	2016	2017	2018	2019	2020	2021	2022	2023
Elementary Schools						Remote/Hybrid Adjustments	Assess & Plan		
						Some new units, primarily grades 3-5	New curriculum pilots		
Middle Schools	New scope & sequence	NPS Middle School Teachers Develop New Curriculum				Remote/Hybrid Adjustments	Assess & Plan	New pilots	

2022-2023 Elementary

Pilots

Science and Technology / Engineering
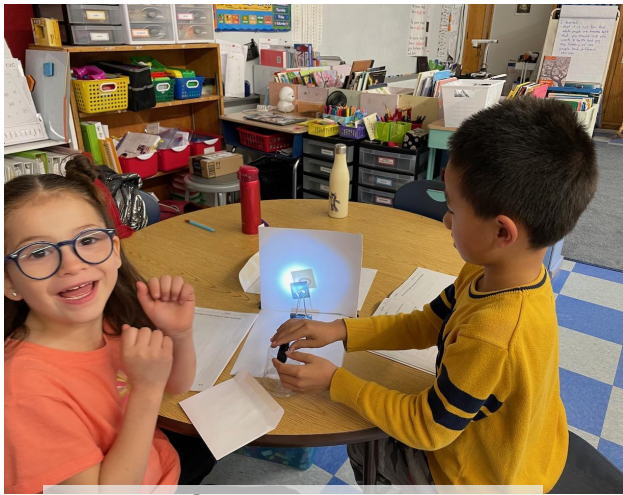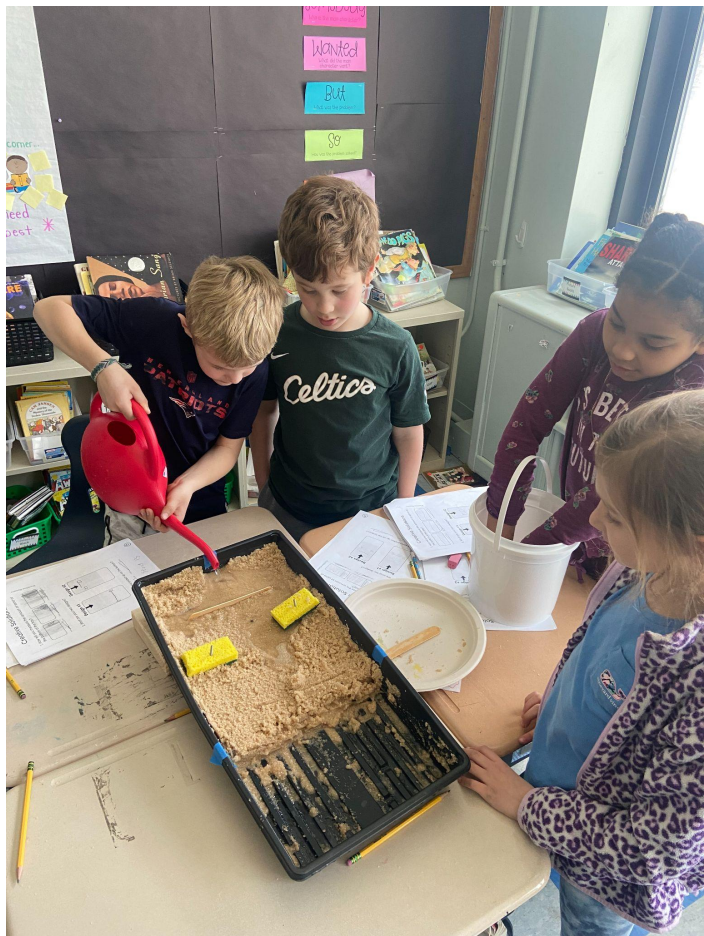
*Grade 1, Pilot
Light and Sound*
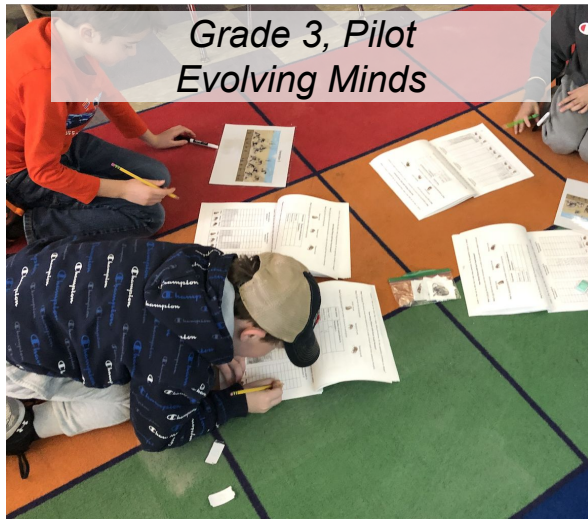
*Grade 3, Pilot
Evolving Minds*
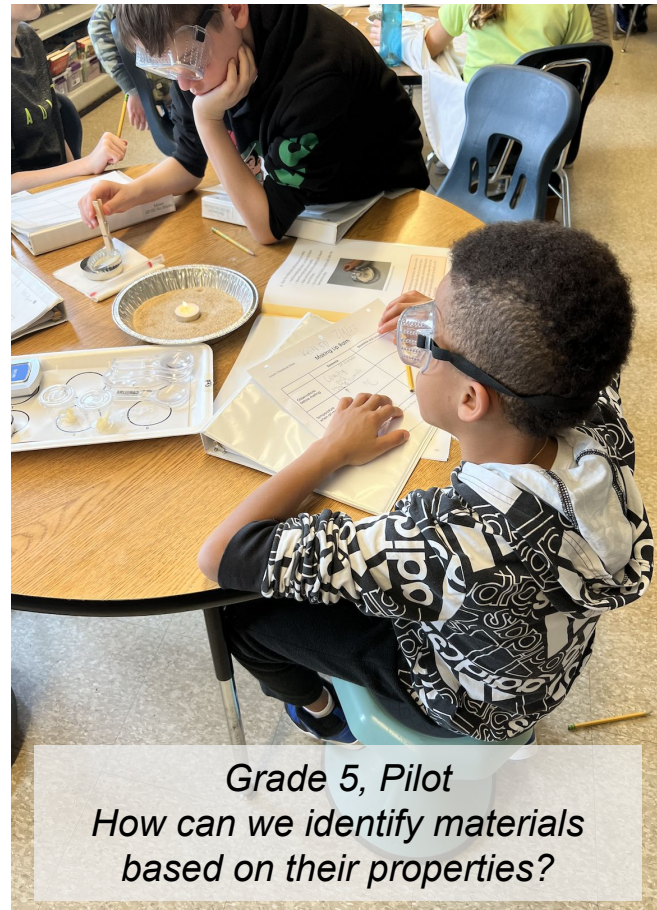
*Grade 5, Pilot
How can we identify materials
based on their properties?*

NPS

2022-2023 Elementary

New Units

Science and Technology / Engineering

Grade 3, New Unit
Balancing Forces

Grade 2, New Unit
How can we stop soil from washing away?

NPS

2022-2023 Middle School

Pilots
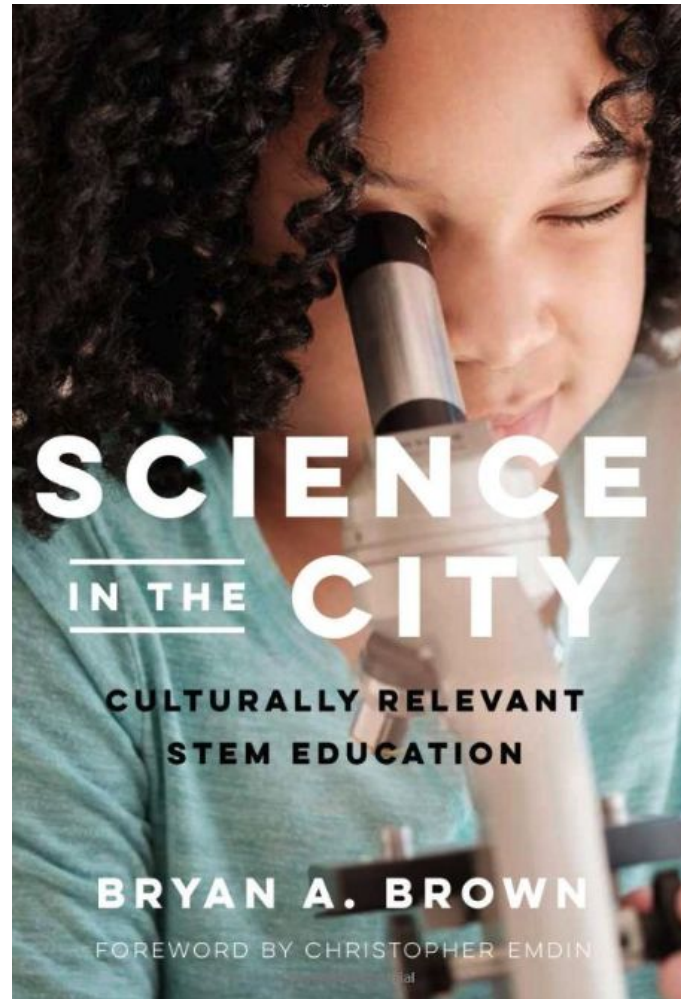
Science and Technology / Engineering

Grade 6, Pilot Light & Matter

Grade 8, Pilot Genetics
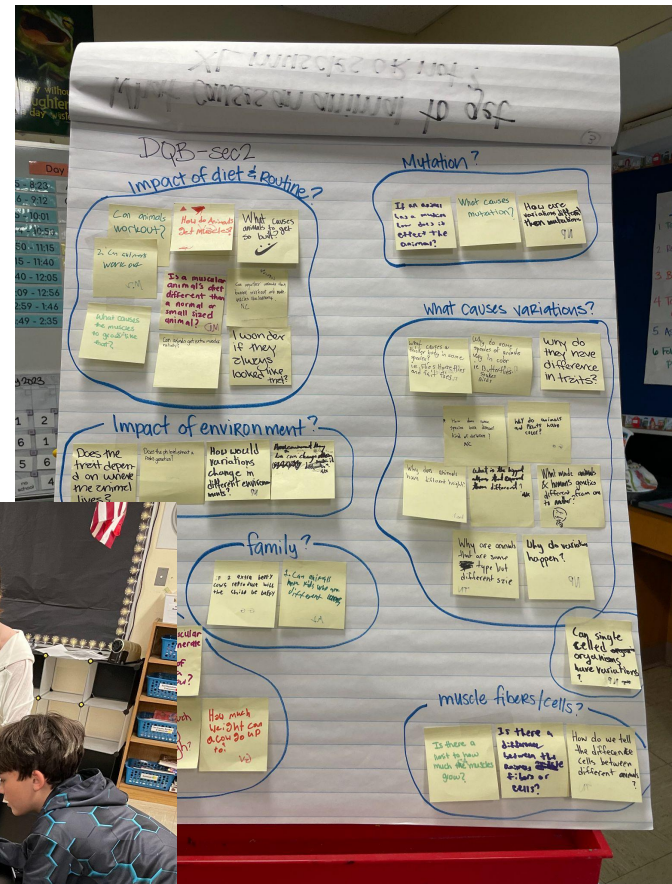
2022-2023
Middle School

Professional
Development

Science and Technology /
Engineering

2023-2024 Focus

K-2

- Application to field test OpenSciEd in two schools in 2022-2023
- Concurrently continue with an additional curriculum pilot

Grade 3

- Implement Evolving Minds unit following 2-year pilot
- Finalize NPS revisions to Climate and Life Cycles unit

6-8

- Grade 6 professional development and implementation of OpenSciEd Light & Matter unit
- Grade 8 collaboratively review Genetics unit pilot

K-8

- Continue work on examining practices around language development
- Expand to include supporting EL students