K-12 Science Curriculum

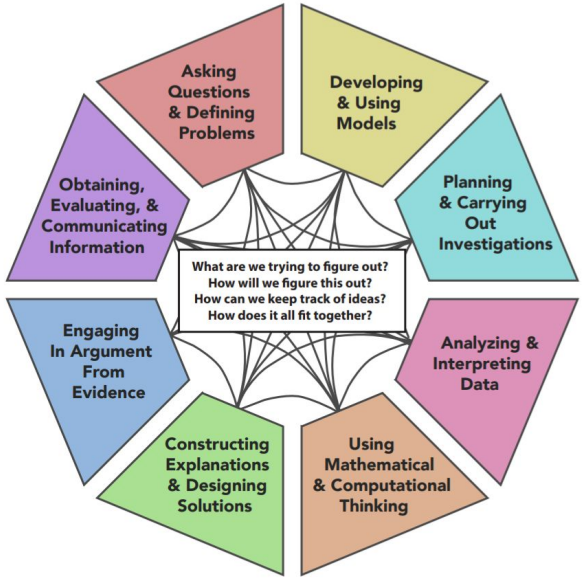
Ms. Victoria Curtis
vcurtis@glencoveschools.org

The New York State Science Learning Standards

A New Vision for Science Education

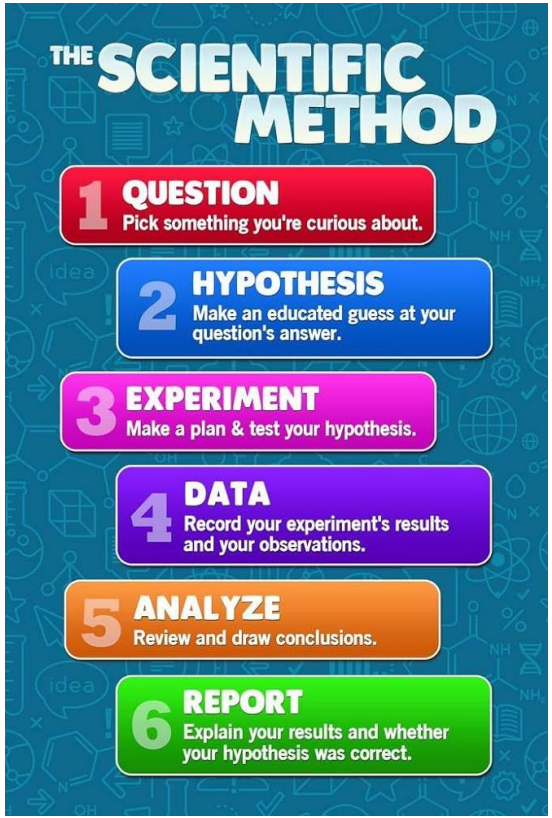
Implications of the Vision of the Framework for K-12
Science Education and the Next Generation Science Standards

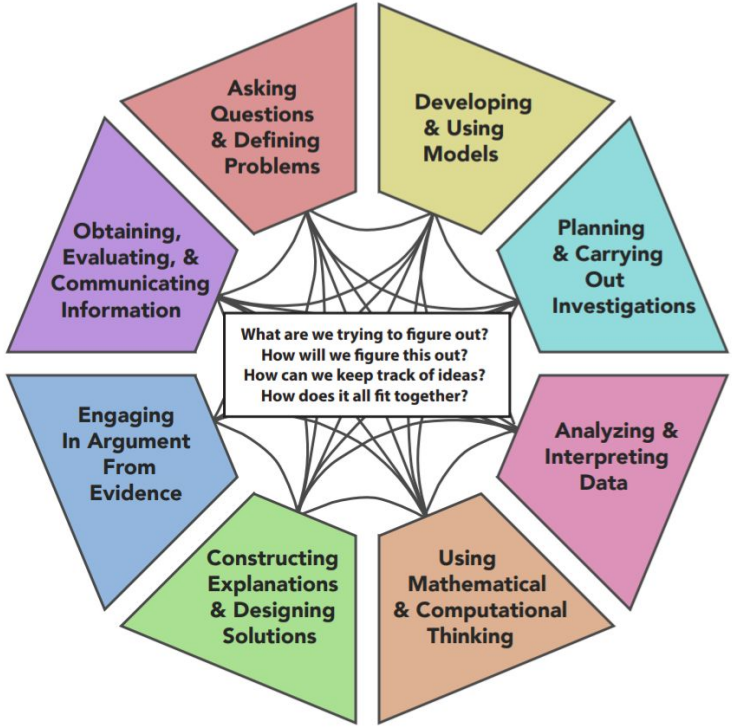
SCIENCE EDUCATION WILL INVOLVE LESS:	SCIENCE EDUCATION WILL INVOLVE MORE:
Rote memorization of facts and terminology	Facts and terminology learned as needed while developing explanations and designing solutions supported by evidence-based arguments and reasoning.
Learning of ideas disconnected from questions about phenomena	Systems thinking and modeling to explain phenomena and to give a context for the ideas to be learned
Teachers providing information to the whole class	Students conducting investigations, solving problems, and engaging in discussions with teachers' guidance
Teachers posing questions with only one right answer	Students discussing open-ended questions that focus on the strength of the evidence used to generate claims
Students reading textbooks and answering questions at the end of the chapter	Students reading multiple sources, including science-related magazine and journal articles and web-based resources; students developing summaries of information.



NEXT GENERATION SCIENCE STANDARDS

The New York State Science Learning Standards





Begin with a Phenomena… Ask Questions & Investigate







Ask Questions & Investigate

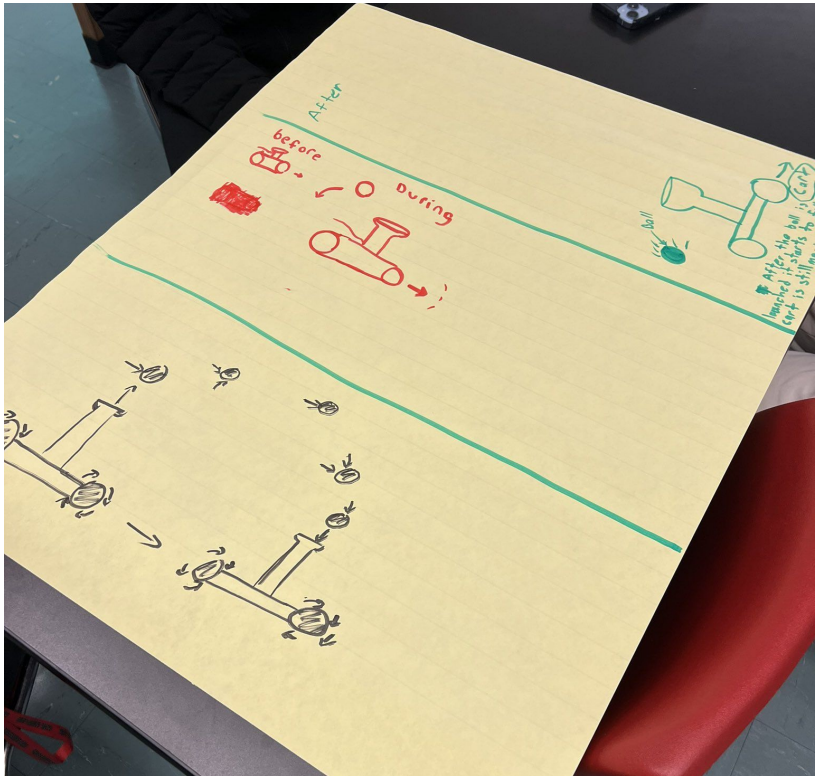




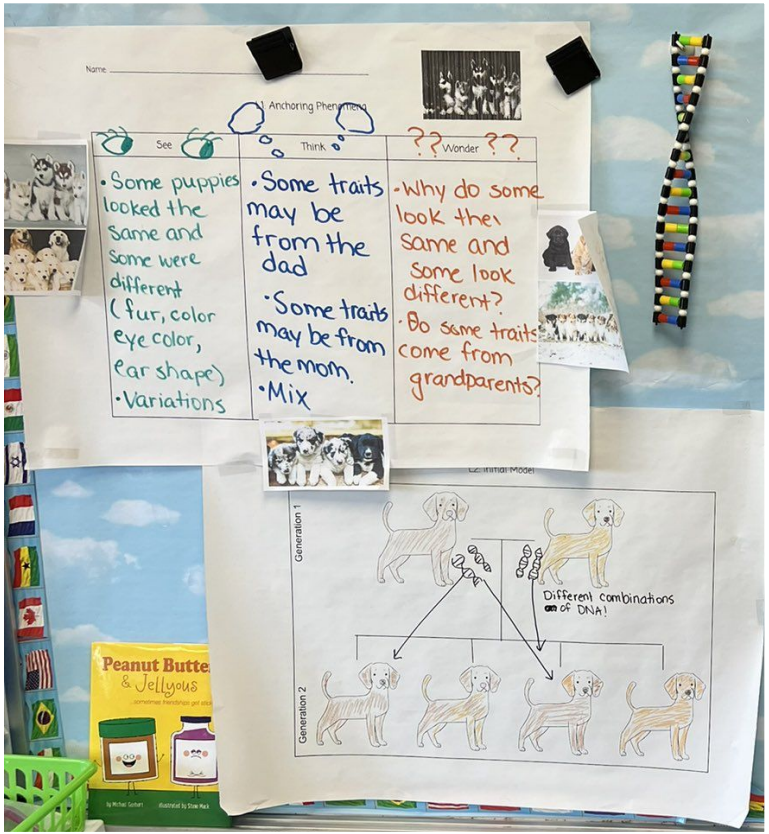


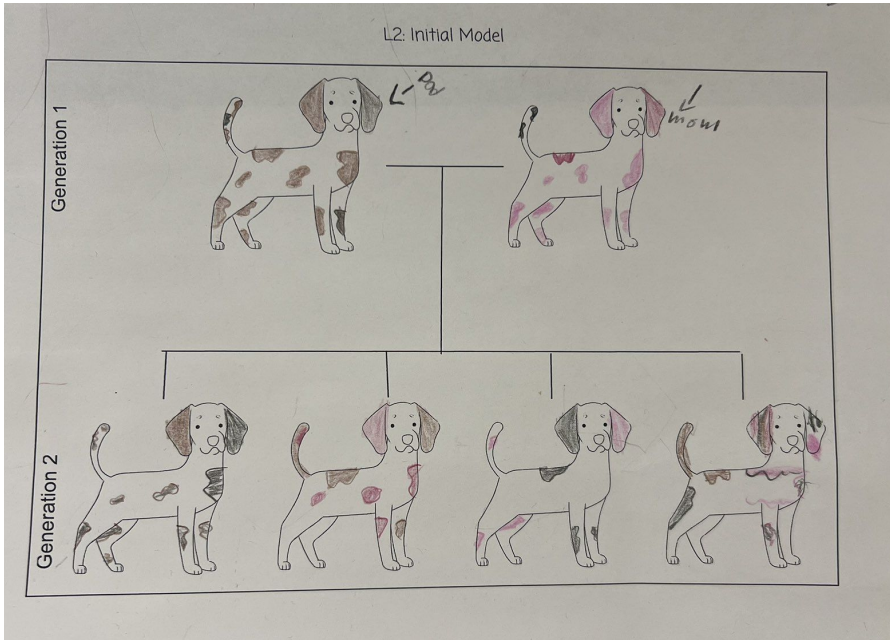
Draw an Explanatory Model To Share Initial Ideas



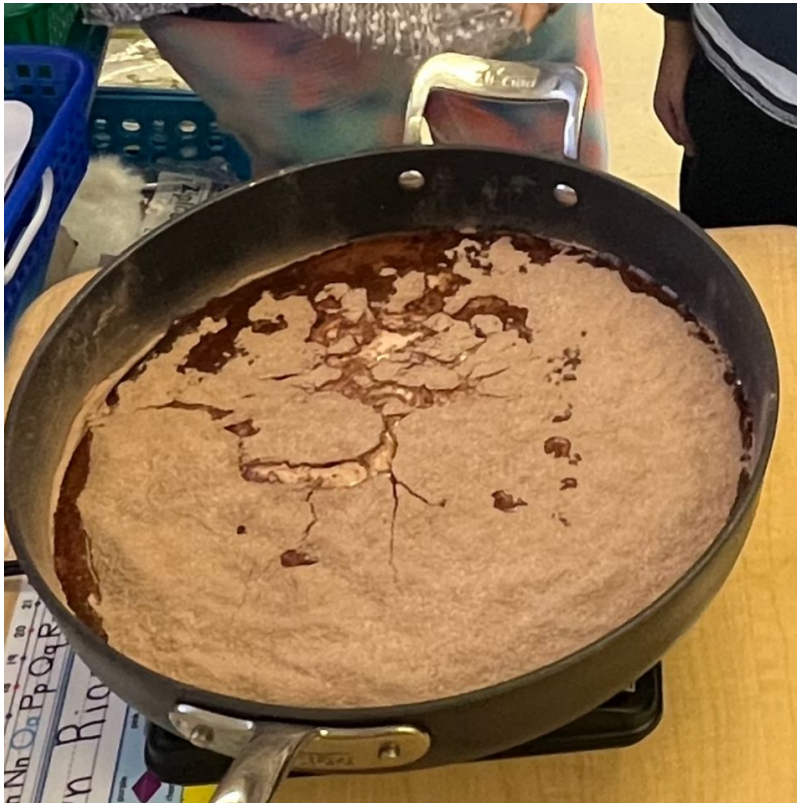


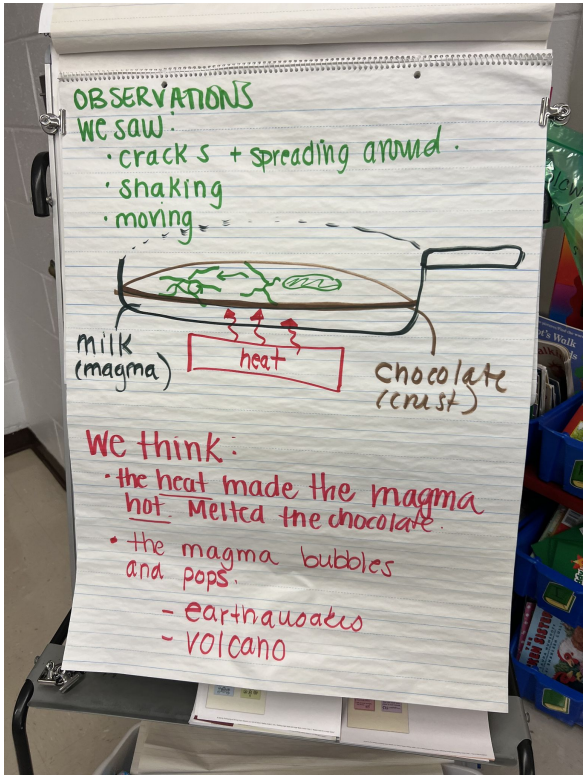
Draw an Explanatory Model To Share Initial Ideas





Investigate Questions to Build Understanding



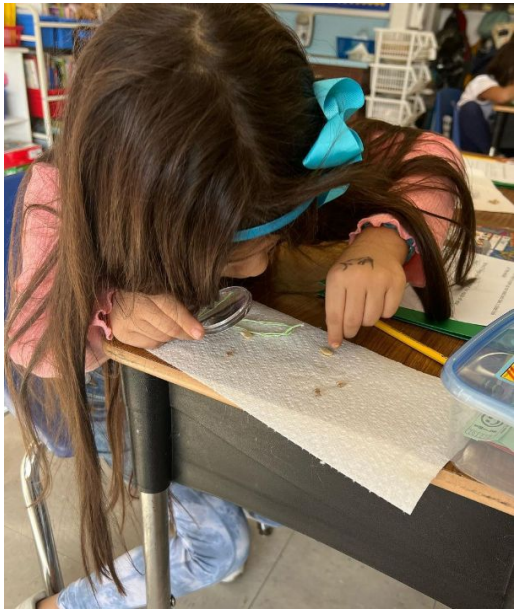


Collect, Analyze & Interpret Data

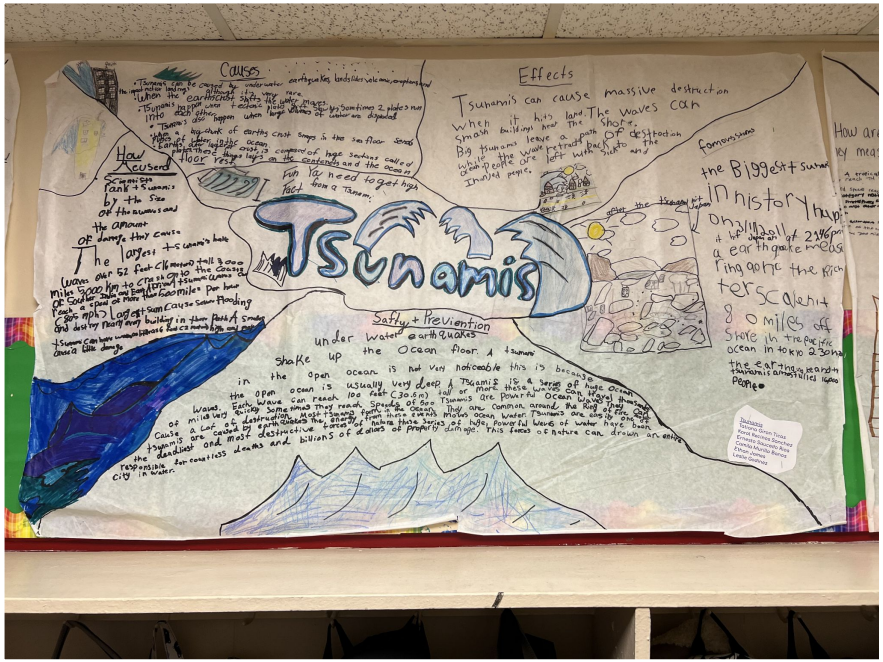


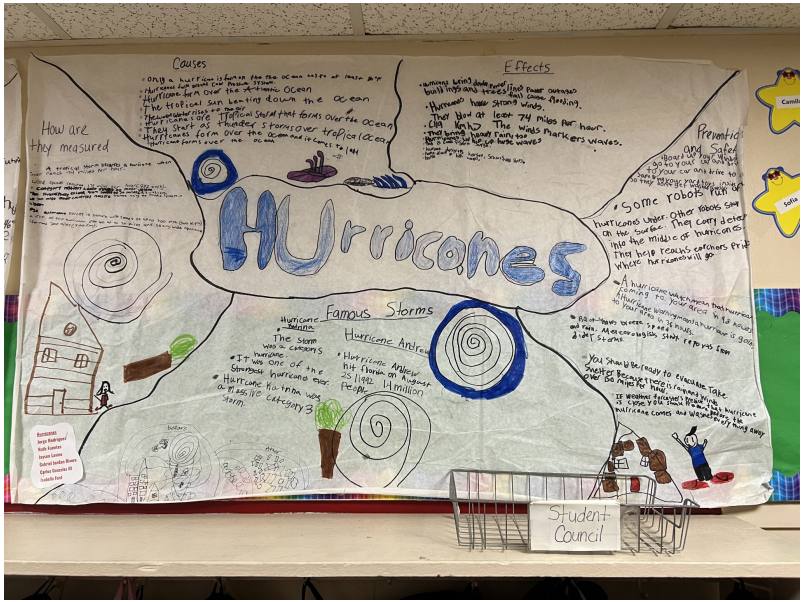






Synthesize Information





Test New Ideas & Questions

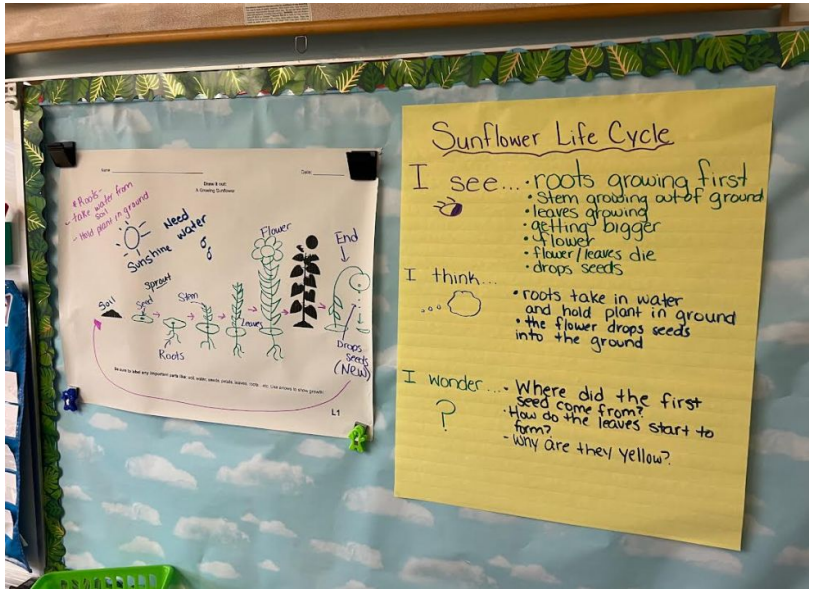




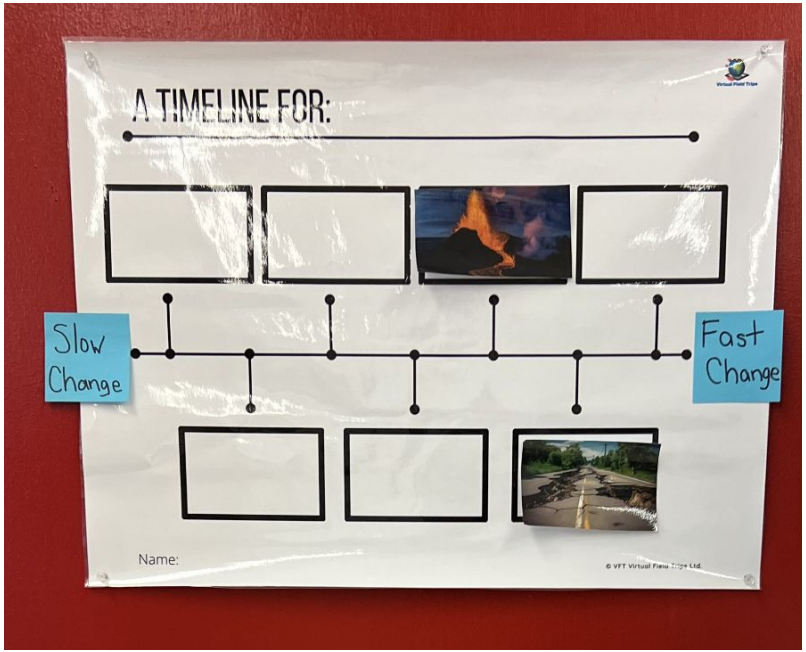


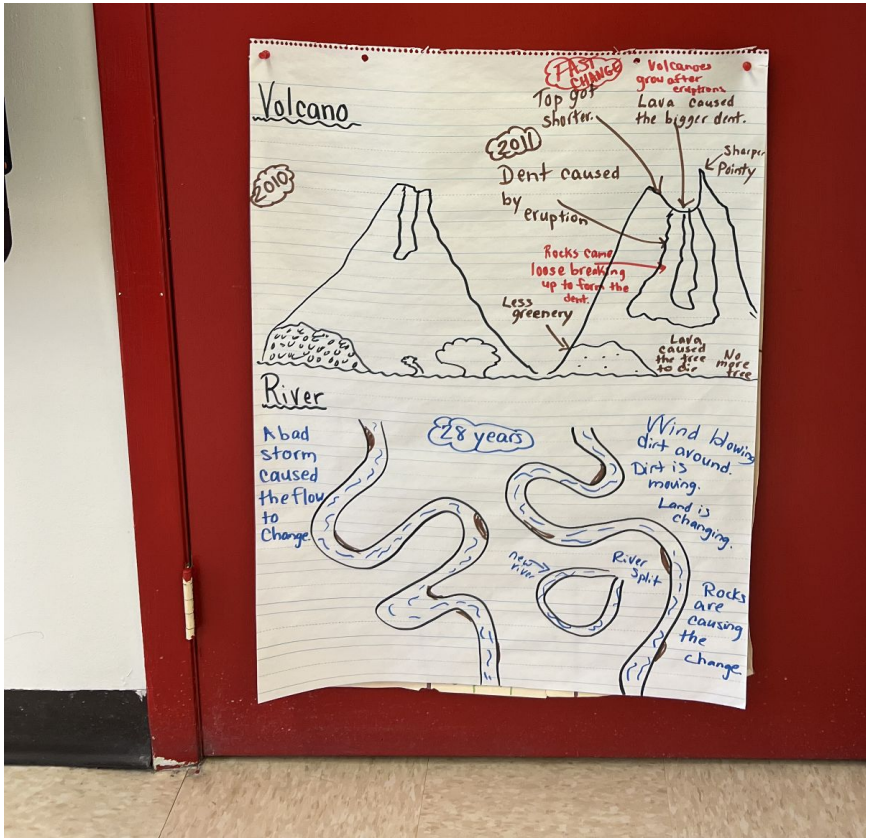
Revise Models in Light of New Information



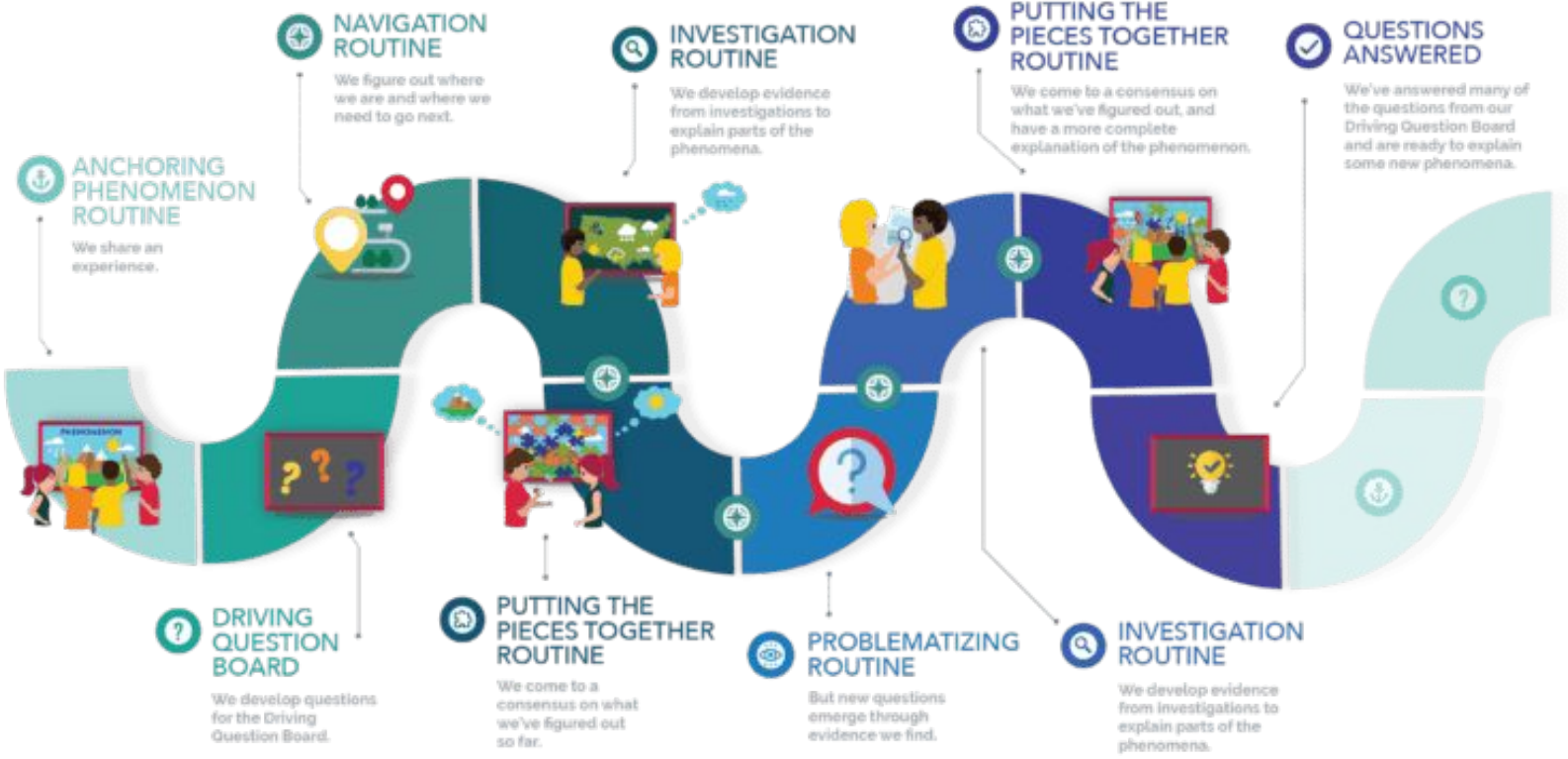


Revise Models in Light of New Information





Strategic Routines



Recognition!

Victoria (Schilling) Curtis @miss_schilling_ · Jan 31

Our 2nd grade scientists comparing multiple solutions to slow or prevent water from changing the shape of land! Which solution do you think is working the best? 🤔💭 #NGSS



11 16 126 7.6K

NGSS Storylines @ASECStorylines · Jan 31

Super cool! I love teaching about cover crops, this is a very cool way to do that!

1 82

WhyMaker | Designing the Future of Education @WhyMaker · Feb 1

Young scientists in action, love it!

1 46

dailySTEM (Chris Woods) @dailystem · Jan 31

Nice job!

1 109

K-12 Collaboration!



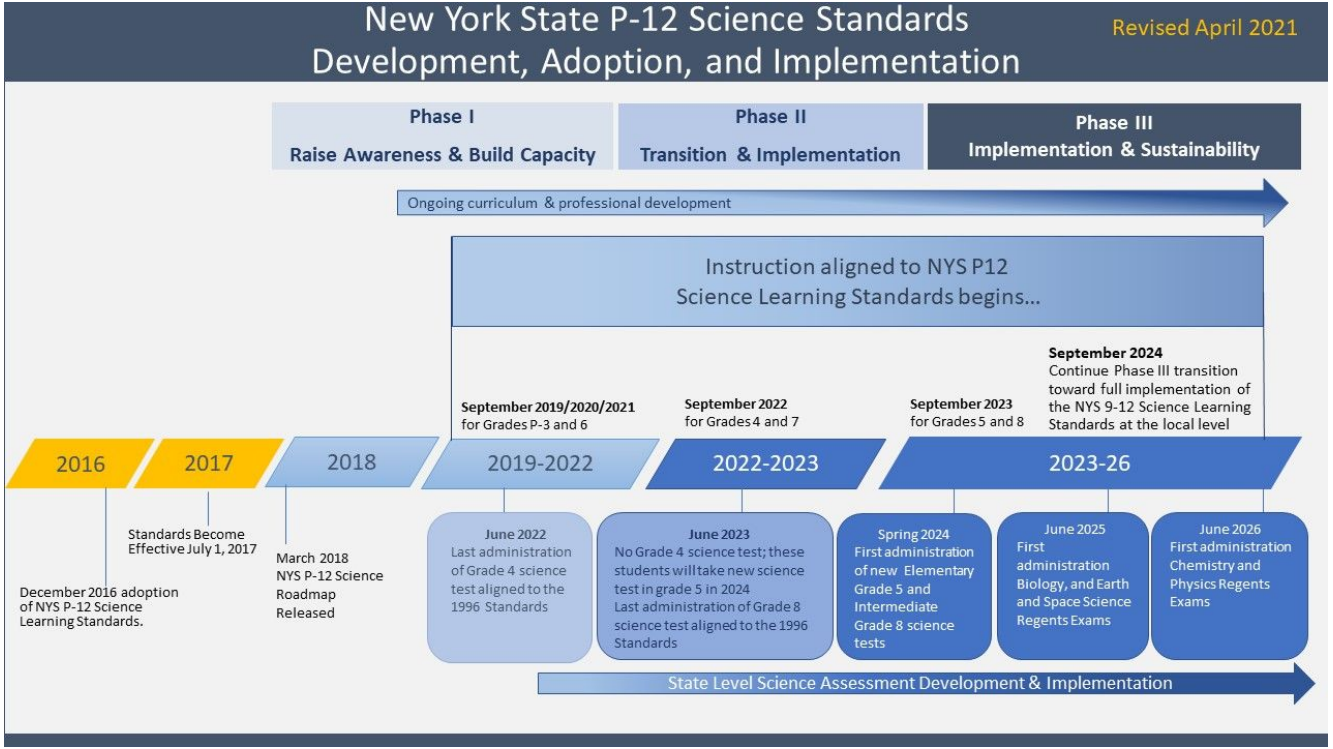
The New York State Science Learning Standards Grade 5 Assessment

- **Required Investigations**
  - 3rd grade - Life Cycles
  - 4th grade - Light it Up! (Circuit)
  - 5th grade - What's in the bag? (Chemical Reactions)
  - 5th grade - Cloud in a Bottle (Weather)

- **Assessment Dates**
  - Landing: May 10th and 13th
  - Connolly: May 14th and 15th

- **Assessment Format**
  - Clustered task questions

High School Assessment Timeline



Let’s hear from our K-12 Scientists



Science Spotlights!

Success in Chemistry: GCHS Junior Represents Glen Cove City School District in Prestigious Competition

Apr 3 2024 2:17 PM



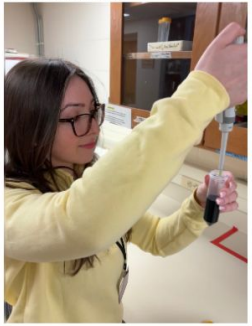
Grace Guillen Admitted to the NIH "Short-term Research Experience Program to Unlock Potential" hosted at Cold Spring Harbor

Mar 27 2024 1:38 PM



GCHS Student's Journey as an Intern at the Dolan DNA Learning Center

Mar 13 2024 9:51 AM





Looking Back…

- **Pre K-5** Family STREAM Night
- **K-12 Grade** Solar Eclipse Visit & Celebrations!
- **3-5 Grade** Vanderbilt Visit
- **4th Grade** Visit with NYIT - Are you stronger than a Lemur?
- **5th Grade** Cold Spring Harbor - Fruit Fly Mutations Lab
- **MS & HS** Living Environment Cold Spring Harbor - Bacterial Transformation Lab
- **High School** Pre-Med Visit to Glen Cove Nursing Center
- **High School** visit from Northwell Nurses
- **High School** Science Research Women's History Competition
- **High School** Science Olympiad Competition



Looking Ahead…

- **May 17th -** K-2 Eco Carnival with MS & HS Student Volunteers
- **May 21st -** Research Symposium & Grade 4/5 Science Fair
- **May 22nd -** High School visit to Grade 4 - Cow Eye Dissection
- **May 29th -** Science Research Field Trip To Audubon Center
- **May -** Grade 2 Visits the High School for Chemistry Day!
- **May -** Grade 6 Scientists visit Deasy & Gribbin for Volcano Presentations!
- **June 4th** - Science Research Presentations at Cold Spring Harbor
- **Summer -** 10-12 High School Students will volunteer 100 hours at GC Hospital.
- **Summer -** New Science Labs!

Thank you!

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