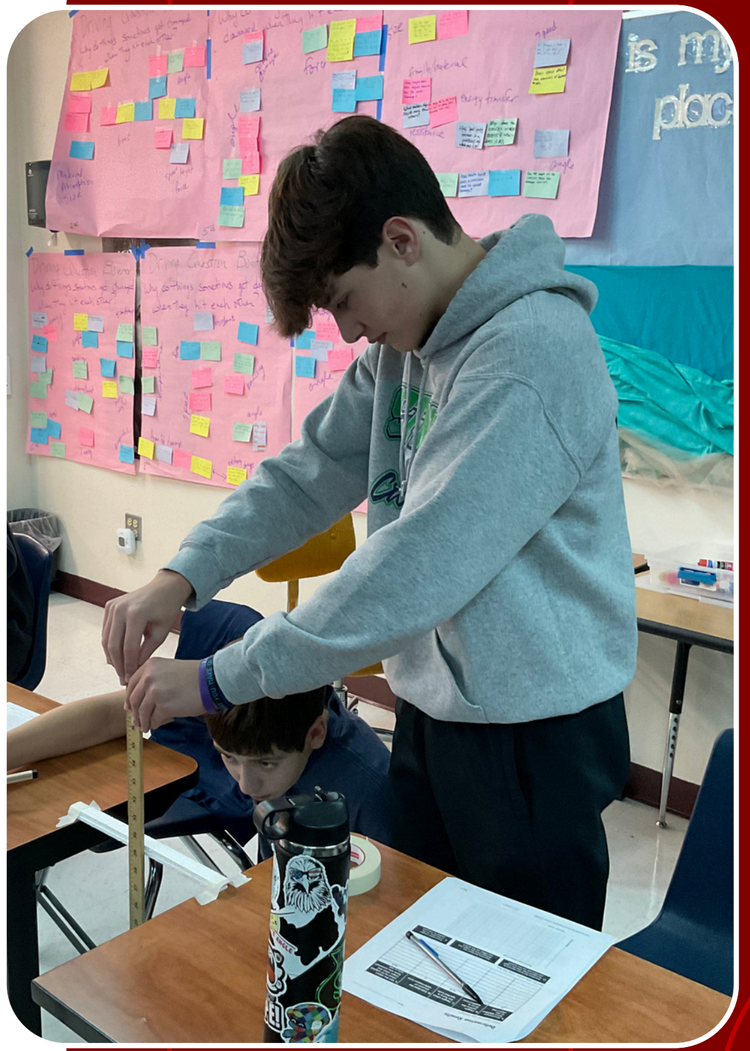


SCIENCE CURRICULUM REVIEW

Libertyville District 70
February 2025

HMS SCIENCE DEPARTMENT

Jasper Liu

Angie McCarthy

Tara Oshinski

Mike Rumpf

Jeanne Klemp

MaryBeth Romano

Julie Jermakowicz

Kerri Bongle

ELEMENTARY SCIENCE COMMITTEE

Sarah McPherren
Bethany Alvarez
Alicia Howell
Sydney Orlowsky
Theresa Gasick
Jennifer April

Lauren Koenig
Riley Gick
Leanne Walker
Laurie Friedman
Becky Wickboldt
Mallory Steinhoffer
Amy Hay

Valerie Plebanski
Daniel De Paz
Stephanie Wilson
Kendall Miller
Julie Jermakowicz
Kerri Bongle

TEACHING, LEARNING & ASSESSMENTS

PREVIOUS COMMITTEE WORK

23-24 School Year

- Committee met for the year to review needs in the area of science in **K-5 & 6-8**
- **K-5** Teachers were surveyed to assess the need
  - Survey results showed that K-5 Teachers were satisfied with their current curriculum & data from IAR supported that decision
- **6-8** had a need to look at options for a new curriculum at HMS
- **6-8** Science Department looked at options with Science Consultant Anne Reichel

OUR**MISSION:**
Empower student growth and achievement through equitable, challenging opportunities that promote excellence, innovation, critical thinking, and respect.

LIBERTYVILLE
SCHOOL DISTRICT

TEACHING, LEARNING & ASSESSMENTS

GOALS

- [ ] **Build Curiosity**
- [ ] **Increase Agency**
- [ ] **Strengthen Discourse**

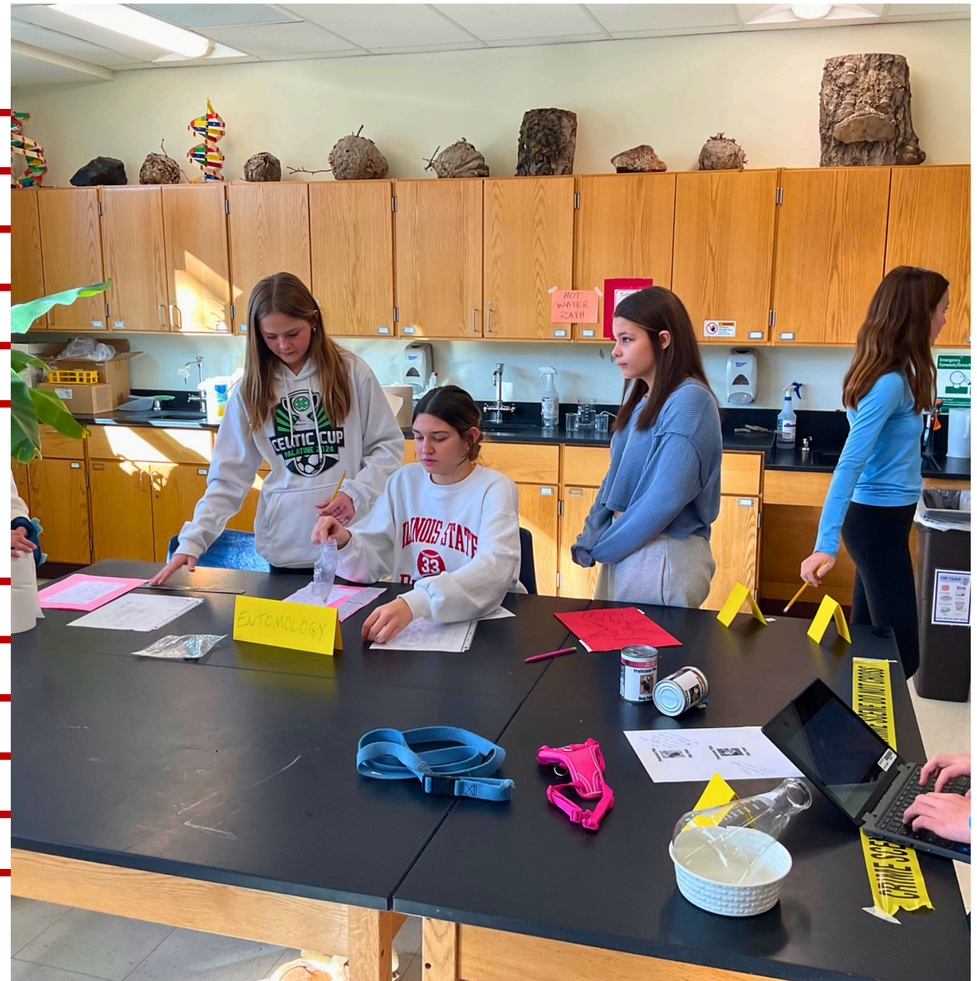
LEARNING & INNOVATION

Focus on equitable and inclusive outcomes of success and achievement for all students.

Design and implement active and authentic learning experiences applicable to academics, arts, athletics and citizenship.

SCIENCE REVIEW TIMELINE

Highland Middle School



May Initial Committee Meeting

June Summer Work

Aug Professional Development

Oct Pilot Implementation Begins

Nov NSTA Conference

Dec Site Visits

Jan Review of Pilot

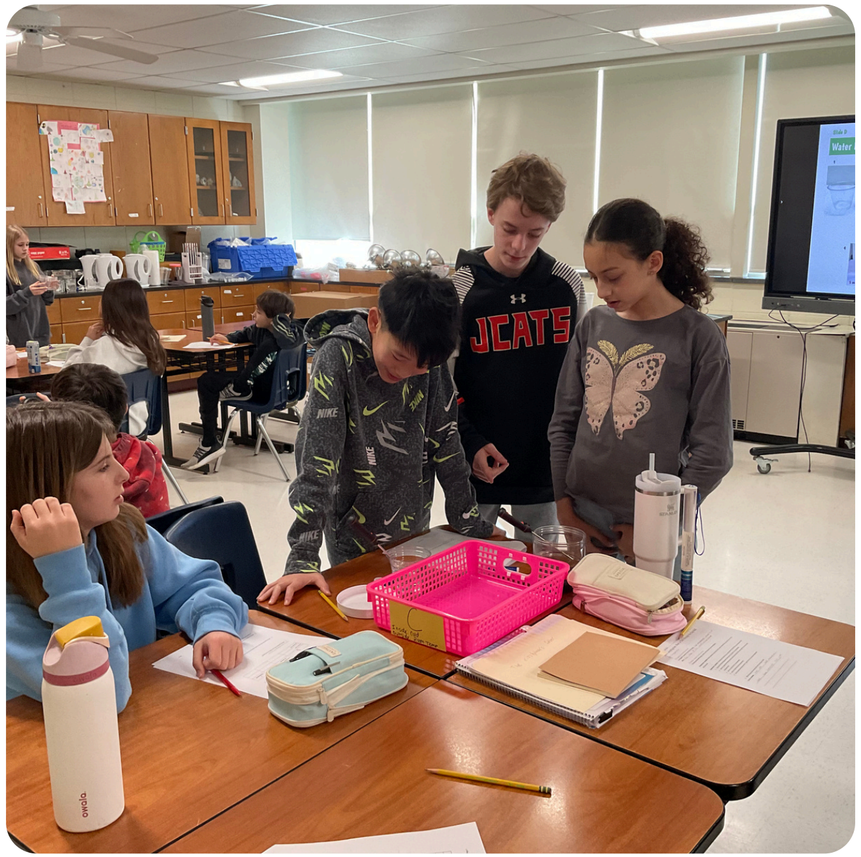
TEACHING, LEARNING & ASSESSMENTS

MAY 2024
INITIAL COMMITTEE MEETINGS

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.
Pre-planned outcome for "cookbook" laboratories or hands-on activities	Multiple investigations driven by students' questions with a range of possible outcomes that collectively lead to a deep understanding of established core scientific ideas
Worksheets	Student writing of journals, reports, posters, and media presentations that explain and argue
Oversimplification of activities for students who are perceived to be less able to do science and engineering	Provision of supports so that all students can engage in sophisticated science and engineering practices

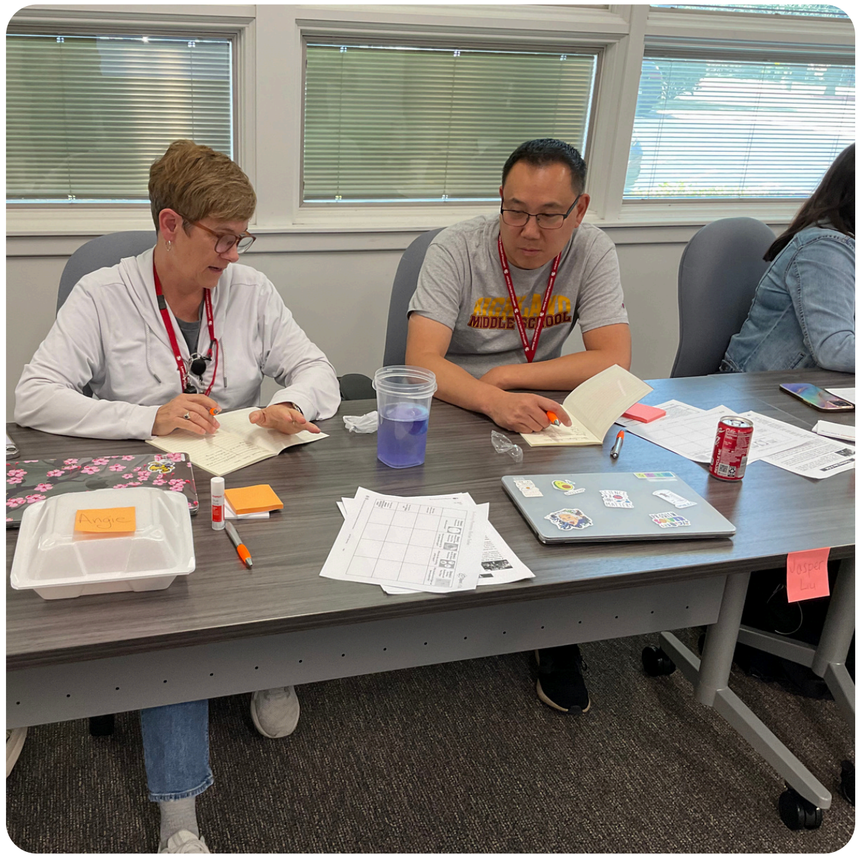
- Met with Science Consultant, Anne Reichel
- NGSS Standards Update
- Review Evaluation Criteria

JUNE 2024
SUMMER WORK



- Department Curriculum Review
- Pilot Materials Selected

AUGUST 2024
PROFESSIONAL DEVELOPMENT



- 1/2 Day Training
- Focus on Sensemaking & Phenomena

OCTOBER 2024
PILOT IMPLEMENTATION

- Lesson Pacing
- Instructional Shifts

NOVEMBER 2024
NSTA CONFERENCE

- Attended Seminars on Sensemaking, Instructional Strategies & Assessment

DECEMBER 2024
OPENSCI ED VISITS

- Visited Aptakisic Tripp Jr. High & Twin Groves Middle School
- Observed OpenSci Ed lessons in classrooms
- Met with staff to discuss strengths and areas of focus moving forward

JANUARY 2025
PILOT REVIEW

- Department discussions
- Student Voices
- Established professional development needs
- Determined material needs

ORDER PROPOSAL

Activate Learning®	1 year	3 year
Classroom Kits (4 kits per grade level)	$25,780	---
Teacher Editions (4 per unit)	$912	---
Teacher Digital Access (7 licenses)	$175	$455
Professional Development (2 Full Days & 2 Half Days)	$10,000	---
el Gizmos	$3,333	---
Total (Includes Shipping)	$43,403.04	43,683.04

ORDER PROPOSAL

Order Materials	April 2025
Activate Learning Full-Day Training	April 2025
Department Summer Work	June 2025
Activate Learning Full-Day Training	September 2025
Department Planning Days & 1/2 Day Trainings w/ Activate	2025 - 2026 School Year

QUESTIONS?

	Amplify 2018	OpenSciEd Activate Learning 2023
Depth of Phenomena Integration	Every unit is explicitly designed around a central phenomenon. This focus ensures that all learning activities are connected to the phenomena, providing a consistent and structured exploration.	•Deeply integrates phenomena, but with a stronger emphasis on student-driven inquiry and flexibility. This approach allows students to explore phenomena in more open-ended ways.
Digital Tools	Digital tools and simulations are heavily used to enhance the exploration of phenomena. This can be engaging and provide diverse learning experiences.	• Includes digital resources but strongly emphasizes hands-on, minds-on activities and investigations.
Professional Development & Support	Provides structured professional development to help teachers implement the phenomena-based approach using the provided digital tools and resources.	Offers extensive professional development focused on helping teachers facilitate student-driven inquiry around phenomena. The support aims to ensure effective implementation of the flexible, hands-on approach.
Summary	After reviewing 8th-grade sample materials and continuing to dialogue with Anne Reichel, we decided not to proceed with a pilot of Amplify.	• Reviewed sample materials and met with representatives from Activate. • Proceeding with piloting the first two units of each grade level in the fall of 2024

HIGHLAND SCIENCE PILOT

	Amplify 2018	IQWST Activate Learning 2019	OpenSciEd Activate Learning 2023	OpenSciEd Carolina 2023	OpenSciEd Kendall Hunt 2023
			same program, delivered through different vendors		
EdReports	Meets Expectations	Does Not Meet	Meets Expectations	Meets Expectations	Meets Expectations
Initial Observations	• Literacy requirements take away from hands-on science exploration	• Program did not meet expectations	• Strong digital platform for teachers and students • Quick/Informed feedback from reps	• Digital version utilizes Powerpoint • Liked the format of student books	• Did not offer advantages compared to the 'Open Source" version