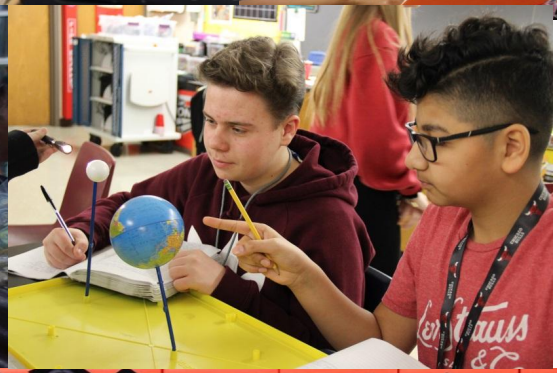

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School District U-46 Academy Honors Physical Science 2026-2027

Board of Education Presentation

Presenters

Brian Tennison, Assistant Superintendent of Teaching and Learning
Celia Banks, Director of Curriculum and Instruction
Deb McMullen, Coordinator for K-12 Science & Planetarium
Frankie Valenzia, Secondary Science Instructional Coach

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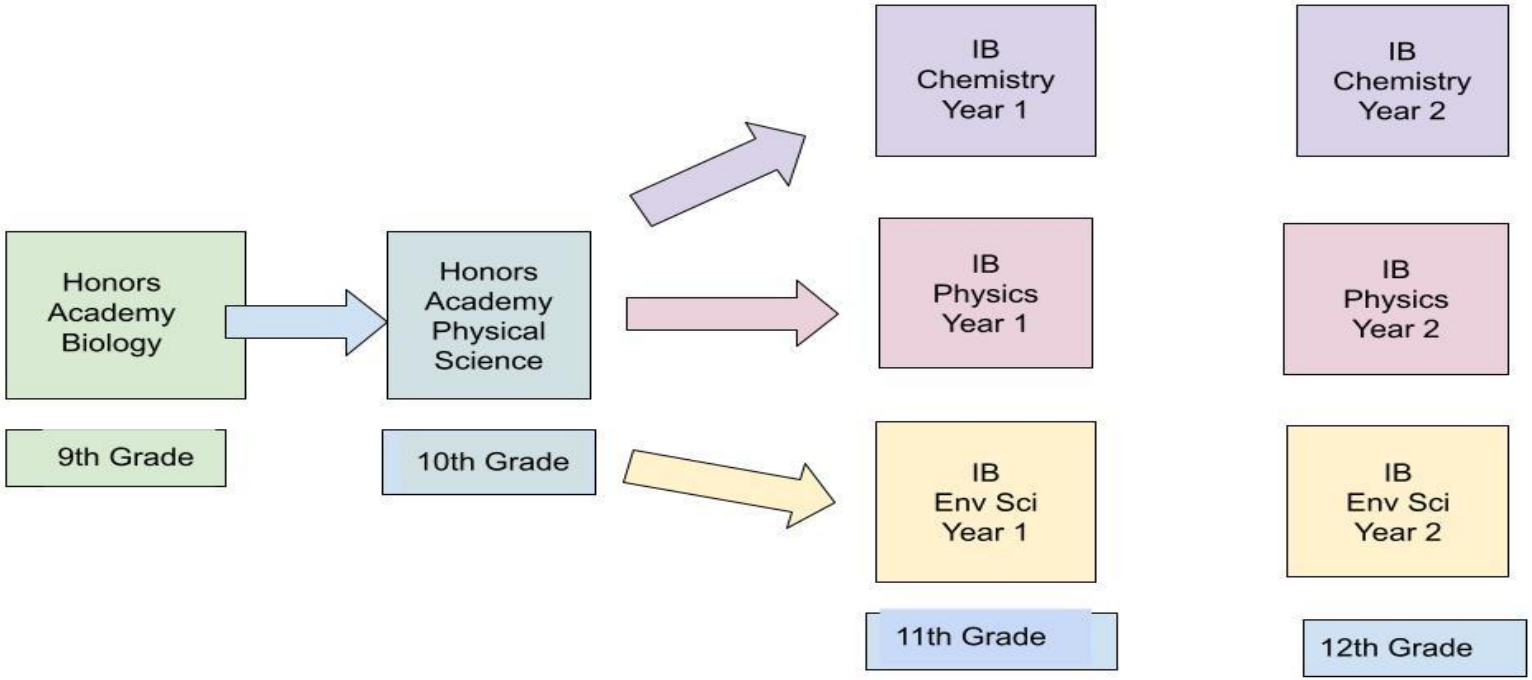
March 16, 2026

Purpose

This proposal seeks funding for the adoption of new resources and professional learning for Academy Honors Physical Science for the International Baccalaureate (IB) Academy at Elgin High School.

IB Science Pathway



Alignment to Strategic Plan

GOAL #1

1

Building Early Academic & Social-Emotional Foundations

GOAL #2

2

Safety, Sense of Belonging, & Inclusion

GOAL #3

3

Academic Growth & Mastery

GOAL #4

4

Ready to Embrace a Diverse & Changing World

Rationale

Vertical Alignment: Establishes a clear conceptual and skills-based bridge supporting enrollment in Diploma Programme (DP) science courses.

Equity of Access: Provides all students with access to IB-aligned practices before committing to an IB science pathway.

Scientific Skill Development: Explicitly teaches experimental design, data analysis, and scientific communication modeled after IB Assessments.

Interdisciplinary Coherence: Integrates chemistry, physics, and Earth & Space science concepts to reflect how science is applied in real-world contexts.

Teacher Feedback

Staff	Role
Brittney Mallen	IB Environmental Science
Nicholas Bumbales	IB Physics
Kevin Collins	AP Physics, Honors Chemistry
Lisa Holbrook	IB Chemistry, Honors Chemistry
Leroy Reinke	Honors Biology & Current Gifted Academy Introductory Course
Cristina Cabrera	IB ELA & Lead Teacher of the IB Academy
Frankie Valenzia	Secondary Science Instructional Course
Milena Nedeljkovic	Assistant Director Post Secondary Success
Jeremy Burnham	Assistant Principal of Innovations
Deb McMullen	Coordinator of k-12 Science & Planetarium

Process Timeline

April 2025 - Initial team planning session.

May 2025 - Review of 1st drafts of Honors Biology & Academy Honors Physical Science.

June 2025- Meeting with Administration Team to present status.

September through November 2025- Finalization of outlines with teacher feedback.

2026-2027- Teachers will participate in Professional Learning (some have already attended sessions).

2026-2027- Early adopters utilize Academy Honors Physical Science.

2027-2028- Full Implementation.

Standards

Next generation Science Standards

- OpenSciEd Chemistry and Physics units
- Skill and content gap analysis to build bridging activities

High Impact Research Based Instructional Routines

- NGSS three-dimensional learning
- IB Diploma Programme practices
- District common assessment data and student performance trends.

Program Overview

Teachers analyzed Chemistry and Physics frameworks and identified shared conceptual threads, skills, and assessment practices.

Academy Honors Physical Science is a full-year laboratory science course combining:

- Core Physics concepts
- Core Chemistry concepts
- Earth & Space Science contexts
- Instruction is organized around anchoring phenomena.
- Each semester culminates in a student-designed capstone investigation

Alignment to Standards and IB Philosophy

- NGSS: All units integrate Science & Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts.
- IB Learner Profile: Emphasizes Thinker, Inquirer, Communicator, Principled, Caring, and Risk-Taker traits.
- IB Assessment Practices: Students engage in repeated cycles of experimental design, data processing, evaluation, and reflection.

Recommended Resources

Adopt OpenSciEd Open Educational Resource (OER) model for Chemistry and Physics.

openscied.org is a high-quality, research-based science curriculum designed to align with the K-12 Framework for Science Education and the Next Generation Science Standards (NGSS).

Implementation Plan

2025-2026
- Write units and bridging activities to cultivate a coherent Academy Honors Physical Science Curriculum
- Purchase and distribute materials
- Professional Learning plan developed with teachers input

2026-2027
- Early adopters implement New Curriculum
- Job embedded Professional Learning (PL) and Support
- Utilize Common Assessment Data to make shifts in instruction & PL
- Utilize Resource Data to make shifts in instruction & PL

2027-2028
- Implement Curriculum and Resources
- Job embedded PL and Support
- Utilize Common Assessment Data to make shifts in instruction & PL
- Utilize Resource Data to make shifts in instruction & PL

Professional Learning

The proposed professional learning model is designed to ensure the effective implementation of OpenSciEd and ensure students are cultivating IB Learner Profile and IB assessment skills.

- Curriculum-focused
- Active learning to engage educators in investigations, assessments and high impact instructional routines
- Ongoing job embedded coaching
- Incorporates structured feedback and reflection, emphasizing long-term engagement

Cost

Item	Total Cost
Print Materials	$6,704.80
Lab Materials	$25,820.15
Supplemental Supplies	$30,448.32
Professional Learning (Provider and Sub Cost)	$12,748.80
TOTAL	$75,722.07

Detailed breakdown of the costs included in the Board Proposal.

Cost

Estimated annual cost for consumable materials $1,500.00

Estimated Per-Pupil Cost over 6 years= $126.20

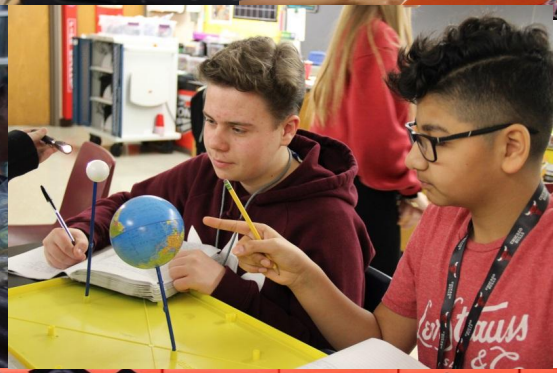
Professional Learning cost includes provider and substitutes.

Plans for the Evaluation of Change

Plans for the Evaluation of Change will be directly aligned to the District Strategic Plan, Goal 3: Academic Growth and Mastery.

The Office of K–12 Science and Planetarium will evaluate using:

- Common formative and summative assessment data
- Capstone investigation performance
- Student enrollment and persistence in IB science courses
- Teacher feedback and implementation fidelity



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