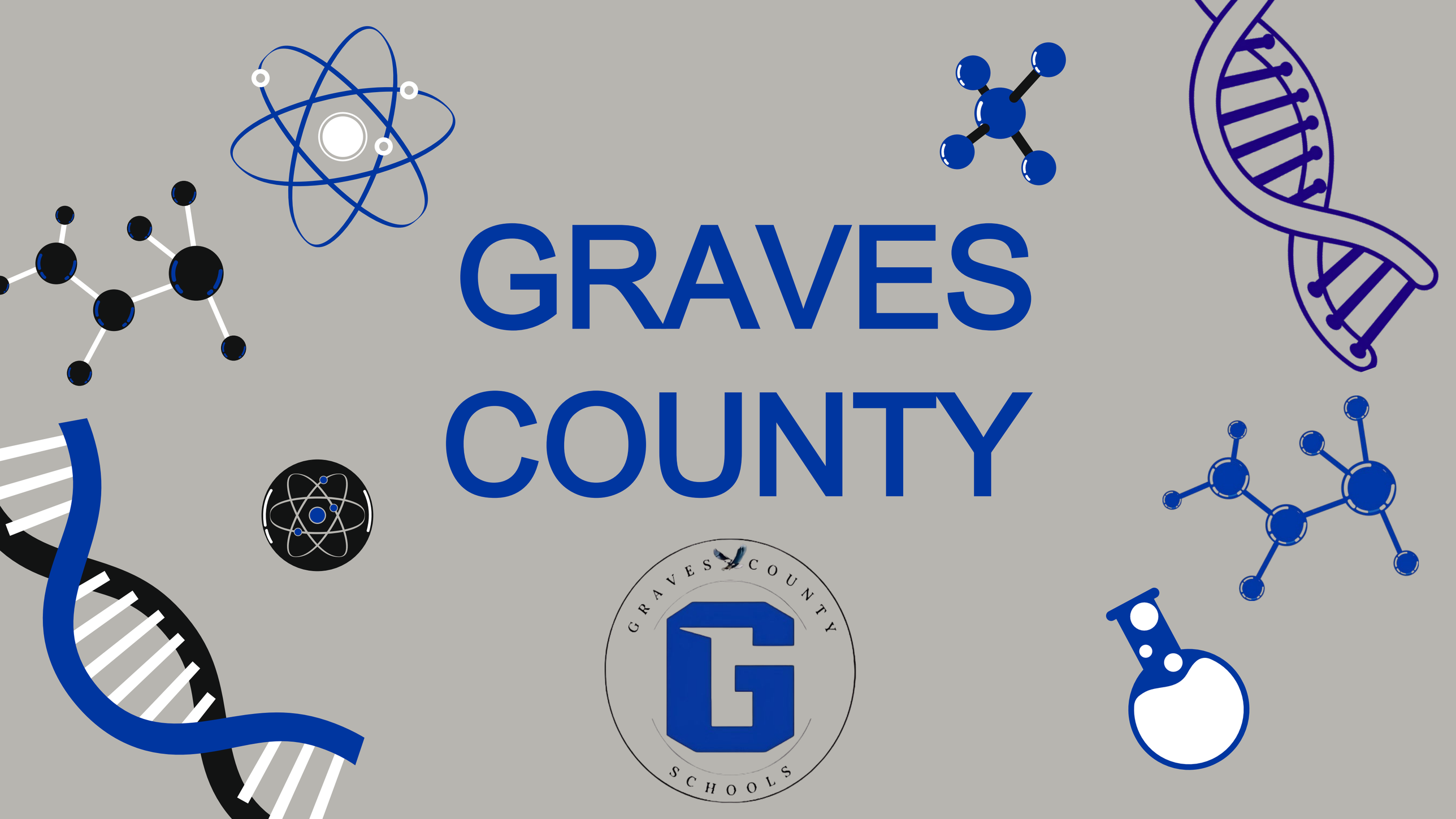
GRAVES COUNTY



1.WHAT HAS YOUR DISTRICT DONE TO ADDRESS SCIENCE EDUCATION K - 12?

As a district we aim to:

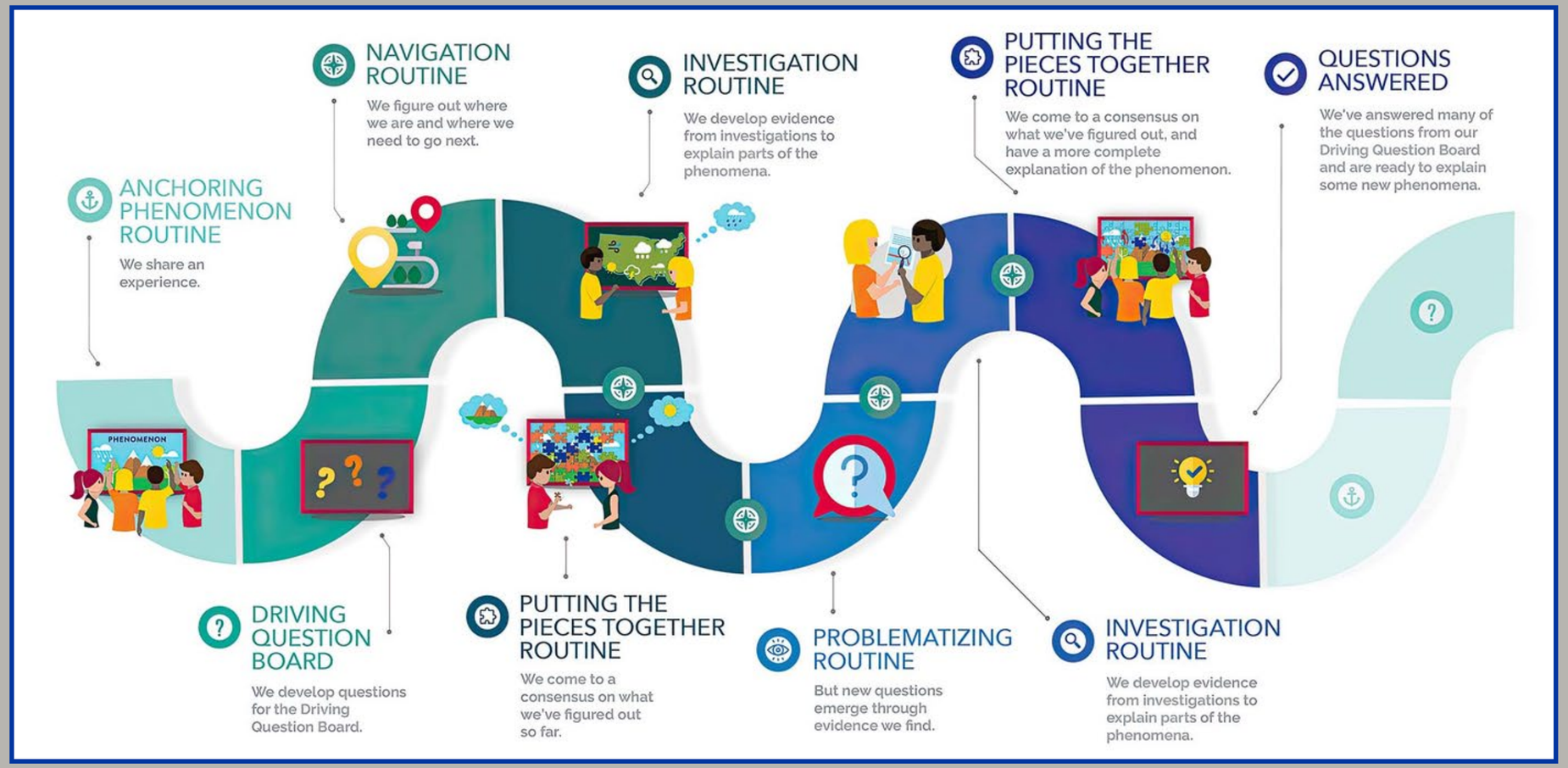
- Demonstrate excellence in academic achievement through high quality engaging experiences.
- Expand learning through district-wide alignment

We adopted Open SciEd as our district science HQIR.

OPEN SCIED

- Grades 6-8 - started in 2020
- High School - started field tests in 2020
- Grade 4 - started in 2025

We realize there are gaps, and as units are released each year, we analyze where the gaps are and ways to bridge them.



As units are released it sometimes takes up to a year before kits are available for purchase

IMPLEMENTATION PLAN

- **Start Small and Scale Strategically** – Begin with a focused implementation in select grade levels and/or content areas to allow time for reflection, adjustment, and strong foundational practices before expanding. As implementation scales, we intentionally leverage these grade-level teacher teams as “expert practitioners” to model strong practices, support colleagues through coaching and collaboration, and help ensure consistency and quality across the district.
- **Prioritize Targeted Grade-Level Focus** – Center the work within specific grade bands and subjects to deepen content knowledge, strengthen instructional alignment, and create clear models of success that can guide future growth.
- **Strengthen Practice Through District-Wide Collaboration** – Intentionally bring grade-level teams together from across the district for meaningful professional dialogue, shared preparation, and deep study of content and instruction. These opportunities allow educators to learn from one another, build collective expertise, and strengthen relationships grounded in trust, collaboration, and shared purpose.
- **Deepen Understanding of HQIR and Standards Alignment** – Engage in ongoing, collaborative study of OpenSciEd alongside state standards to build clarity, coherence, and a shared understanding of high-quality instruction and expectations across classrooms.
- **Identify and Address Standards Gaps with Purpose** – Recognize that HQIR may not fully address every standard and proactively identify areas of need. Develop a yearlong, intentional plan to integrate supplemental lessons, extensions, and supports to ensure comprehensive standards coverage and instructional continuity.

How have you supported principals, teachers, coaches, etc., in implementing high quality science instruction?

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PROFESSIONAL LEARNING

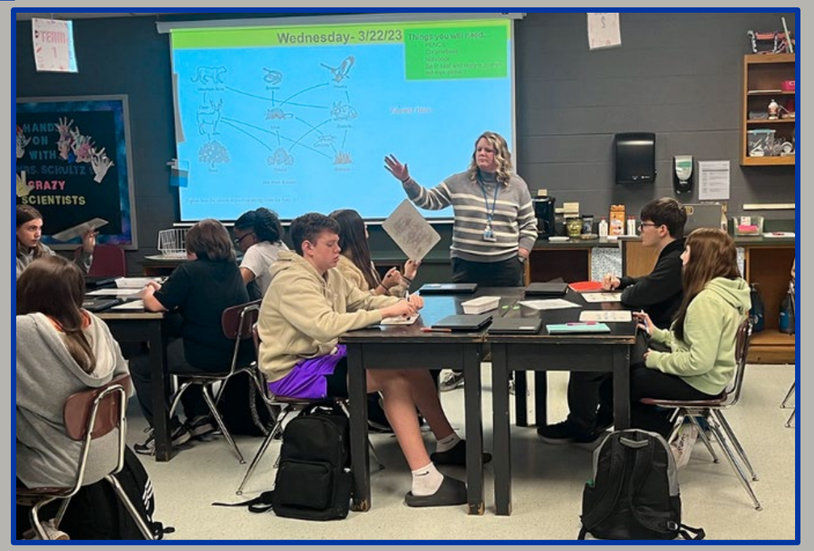
PIMSER
Partnership Institute for Math & Science Education Reform

National Campaign to Visit Schools Transforming Science Instruction with the Help of High-Quality Science Curricula

WKEC **West Kentucky Educational Cooperative**
Engage • Equip • Empower

Knowledge Matters Campaign

SCIENCE LEADERSHIP ACADEMY



Professional Learning Communities (PLCs)

Middle and high school teachers meet monthly in department PLCs to plan instruction and analyze student data. During these meetings, teachers deeply internalize lessons as part of the planning process. Data is used to determine next instructional steps and address student needs. Pear Assessment is utilized to monitor student progress toward mastery of standards.

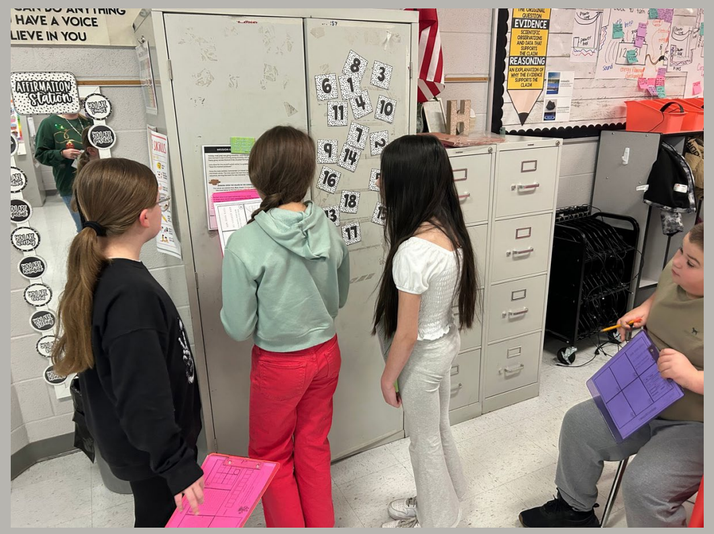
Grade 4 teachers across the district meet before each unit to do unit and lesson internalization. Collaborating, having rich conversations to drive instruction.

Teacher Leaders lead PLCs for all grade levels on Story Lines. This allows all grade levels have a better understanding of how to teach science standards through a phenomena-based approach.

UNIT/LESSON INTERNALIZATION

1. Read overview of the unit to understand the big picture.
2. Analyze how standards are embedded in the unit.
3. Complete the end of unit assessment to identify expectations.
4. Examine lessons to gain overall sense of progression.
5. Connect instructional practices to standards.
6. Review relevant data (pre-assessment, student samples, etc.)
7. Develop a plan for what you will need to do to set your students up for success.

HOW HAS THIS IMPACTED STUDENT EXPERIENCE AND OUTCOMES? WHERE HAVE YOU SEEN GAINS?



TEACHING THE NEXT GENERATION OF SCIENTISTS!

*STUDENTS GAIN REAL LIFE SKILLS AND APPLICATION THROUGH ANCHORING PHENOMENA AND HANDS - ON EXPERIENCES THAT HAVE REAL CONNECTION

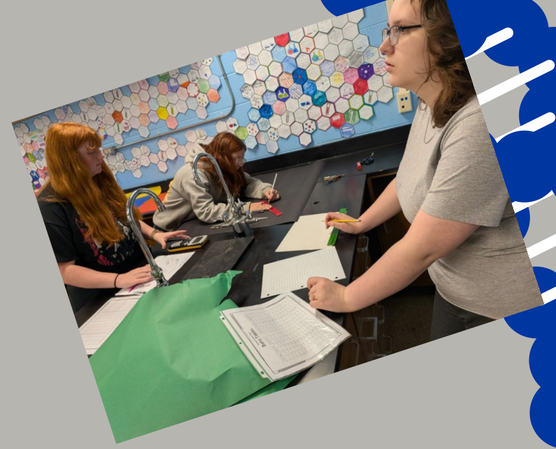
*STUDENTS ARE ABLE TO CONNECT TO THEIR LIVES AT HOME AND SCHOOL (LEARNERS “BUY IN WHEN THEY CAN RELATE”)

*INTRODUCES RIGOROUS CONTENT IN A FUN AND ENGAGING WAY

SOCIAL EMOTIONAL SKILLS AND 21ST CENTURY SKILLS ARE CONSTANTLY BEING USED. STUDENTS LEARN TO DISAGREE AND BE COMFORTABLE WITH BEING WRONG. THEY GAIN KNOWLEDGE FROM EACH OTHER RATHER THAN JUST FROM THE TEACHER, WHICH MAKES CLASSROOM CULTURE SO MUCH BETTER!

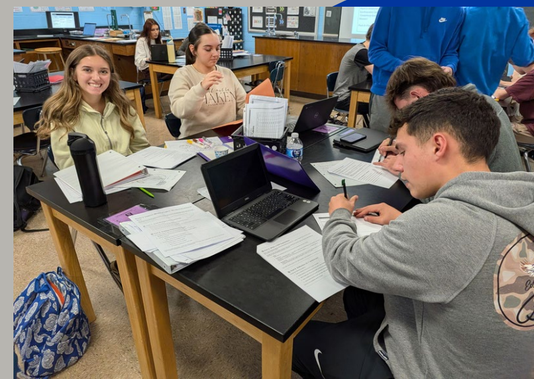
HIGH SCHOOL

Before HQIR Storyline Units	With HQIR Storyline Units
Topic-by-Topic Instruction	Learning Driven by Real Phenomena
Teacher Delivers Content	Students Build Explanations
Isolated Cookie-Cutter Labs	Investigations That Build Over Time
Coverage-Focused	Sensemaking Focused
Worksheet Completion	Evidence-Based Reasoning
Learning About Science	Doing Science



WE SEE STUDENTS:

- ASKING MORE “WHY” AND “HOW” QUESTIONS
- USING EVIDENCE TO DEFEND IDEAS (NOT JUST ANSWERS)
- TALKING TO EACH OTHER ABOUT SCIENCE, NOT JUST TO THE TEACHER
- PERSISTING THROUGH CHALLENGING PROBLEMS LONGER
- VIEWING MISTAKES AS PART OF FIGURING THINGS OUT
- ENGAGING ACROSS ABILITY LEVELS (NOT JUST TOP STUDENTS)



SCIENCE STORYLINES:

*MAKE SCIENCE MEANINGFUL FOR ELEMENTARY STUDENTS

*HELP DEVELOP REASONING AND COLLABORATION SKILLS

*INCREASES ENGAGEMENT

INSTRUCTION IS DESIGNED TO MAKE SENSE TO STUDENTS, SO THEY CAN ANSWER: “WHAT ARE WE DOING?” AND “WHY?” AT EACH POINT IN THE UNIT. CLASSROOM GAINS INCLUDE STUDENTS BEING ABLE TO DEEPEN THEIR THINKING AND SPEAK SCIENTIFICALLY THROUGH COLLABORATION WITH THEIR PEERS.