

STEM EXCELLENCE ACADEMY

COMPREHENSIVE 64-MISSION GRADE 6 STEM PROGRAM

Mathematics • Science • Engineering • Data • Coding • Robotics • Responsible AI

FROM “I GOT AN ANSWER” TO “I CAN TEST IT, IMPROVE IT, AND DEFEND IT.”

A structured STEM journey that builds foundational skill, evidence habits, design thinking, and increasing student independence.

64 SEQUENTIAL MISSIONS

Eight strands progress from quantitative foundations through scientific discovery, environmental systems, computational thinking, and Project AURORA.

EVIDENCE-BASED LEARNING

Students model, calculate, investigate, test, debug, explain uncertainty, revise failed designs, and defend conclusions.

SCHOOL-READY SYSTEM

Student and Teacher Publication Masters, Maryland standards audit, administrator guide, sample edition, and implementation resources.

THE 64-MISSION LEARNING PATH

1-8 Quantitative Foundations	33-40 Scientific Discovery Systems
9-16 Algebra, Coordinates & Modeling	41-48 Earth, Environment & Living Systems
17-24 Geometry & Fabrication	49-56 Coding, Robotics & Responsible AI*
25-32 Data, Probability & Evidence	57-64 Project AURORA

A REPEATABLE MISSION CYCLE

Launch → Learn & Model → Guided Practice → NOVA Challenge → Independent Check → Portfolio & Reflection

PROJECT AURORA

The final eight missions form an engineering capstone: define a need, set measurable requirements, model a system, prototype, test autonomous logic, fuse evidence, review AI-supported recommendations, and defend a final decision.

RESPONSIBLE AI: A.L.G.O.

Ask what AI produced. Look for independent evidence. Gauge limitations and coverage. Own the human decision. AI output cannot independently verify itself.

CLASSROOM PUBLICATION PACKAGE v1.0

Student Edition	Teacher Edition	School Resources
428 pages 64 missions + references + AURORA	86 pages Keys + scoring + differentiation	Launch set Standards audit + admin guide + preview

EXPLORE • PREVIEW • PILOT

Designed for core classroom use, STEM blocks, enrichment, intervention/extension, project-based semesters, and after-school academies.

* Missions 49-56 are Academy enrichment/integration. Missions 28-29 are Grade 7 Bridge / Academy Enrichment. Maryland alignment is documented separately in the standards audit.