SCIENCE

FACULTY SPOTLIGHT

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UPPER SCHOOL SCIENCE
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Learning by *doing.*

Grymes Memorial School recognizes the paramount importance of integrating **science, technology, engineering, art, and mathematics (STEAM)** education with hands-on learning experiences to ignite curiosity, cultivate critical thinking skills, and inspire a lifelong love for scientific inquiry.

Grymes Lower School students engage in learning in the "Rad Lab" STEAM classroom, housing a wide variety of state-of-the-art tools and materials needed for designing, building, and solving engineering challenges, inspiring students to learn and "dream big." Complete with rain gauges, weather stations, concrete building materials, bird feeders, solar panels and circuitry, and even a drone, lower school STEAM education sets the foundation for a robust journey into critical thinking and problem-solving skills, which are essential for navigating today's complex, technology-driven society.

Grymes Upper School science implements the *elevateScience* core 5-8 science curriculum with digital integration. *Virtual Labs* incorporate the full engineering design process through building, testing, using variables, and documenting results for solutioning in a virtual *Lab Notebook*. Students organize science learning around phenomena-based, real-world storylines called *Quests*, which promote active learning through lab activities, and navigate students through in-depth research and investigations to solve real world problems.

Academic Enrichment: **Grymes Engineering Club**

Can Concrete Float?
Grymes enriches its upper school science curriculum with hands-on learning. The Grymes Engineering Club has partnered with UVA engineering students to design and create concrete mini canoes -- a project which will lead to future competitions in our area among local schools.

Alumni Spotlight: **Wilson Ruotolo '08, Hedgehog**

From Forbes 30 Under 30
Wilson Ruotolo co-founded Hedgehog, which builds robotic mushroom farms. His goal: decrease the cost of producing mushrooms by 70% to make the protein-rich food affordable at scale. Hedgehog has raised $4 million since it's February 2022 launch. CEO Balsillie previously founded Indigo Carbon; CTO Ruotolo has a Ph.D. from Stanford, where he focused on the design of robotic hands.

Grymes competes in the Foxcroft School STEM Challenge, a girls-only, hands-on STEM competition for nearly 200 middle and high school students annually from area schools.

*In 2024, Grymes placed **first place** in Biology, **second place** on the tower engineering build session, and **third overall** out of 19 teams.*

The Campaign for Grymes: Phase II

FULL STEAM AHEAD!

A new Upper School science lab will propel Grymes vigorous STEAM program forward. Updated and expanded space is essential for a science classroom to foster innovation, creativity, and a passion for learning. Modern, well-equipped STEAM facilities provide students with hands-on experiences that are critical for understanding complex concepts in science, technology, engineering, and mathematics.

Additionally, an engaging and dynamic STEAM environment will inspire students to pursue careers in these fields to meet the growing demand for science, technology, and math professionals. By investing in an updated STEAM space, our students will be empowered to become future innovators equipped with the knowledge and skills necessary to excel as problem solvers and community leaders.

NEW SCIENCE LABS

A new Upper School and renovated Lower School lab complete with multiple sinks, lab benches, increased storage, sky lights, and windows with ledges for plants

Equipment Wish List

- Teacher lab station
- New microscopes
- SMART Board
- White Board
- Overhead camera
- Aquaponics station
- Physics equipment
- 3D Printer
- Centrifuge
- Advanced imaging equipment

Anissa Frantz
VISUAL ARTS
B.F.A., Frostburg State University;
M.A., National University

Art Integration

Art Teacher Anissa Frantz works across disciplines to incorporate meaningful art discovery to foster creativity, cognition, and content knowledge. Students in fifth grade science study plant and animal cells through inquiry, discussion, and experimentation. Art supports these objectives with a study on cell structure, shape, and imagery, concluding with a student painting using familiar shapes and repetition of color.

"Cell painting"
Nicole V.
Grymes 5th grade student

We invite you to help us **build for the next 75 years of joyful learning** at Grymes.

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More about The Campaign for Grymes

grymesschool.org/academics