Welcome to

language arts, science, and engineering

Is SPIRE the right fit?

Do you like to...

- Work collaboratively to find solutions to real-life problems?
- Think of new ways to do things or come up with outside of the box ideas?
- Guide your own learning?
- Read stories and articles related to other things that you are learning or that you care about?
- Present your findings in new and different ways?
- Engage in scientific inquiry?

If you answered "yes" to these questions, SPIRE may be for you!

SPIRE Approach

Focus on Project Based Learning

Students work individually, in pairs, and in small teams **during class time** to engage in multiple interdisciplinary projects throughout the year, providing a unique learning experience. These projects will allow students to experience the world as it exists outside of classroom walls.

Integration across Content Areas

Class activities and projects will allow students to work on mastery of skills and standards for multiple content areas. This allows for class experiences to have greater relevance to the student.

Emphasis on 21st Century Skills

SPIRE students explicitly practice and improve their 21st century skills such as critical and creative thinking, collaboration, communication, leadership development, and technology skills.

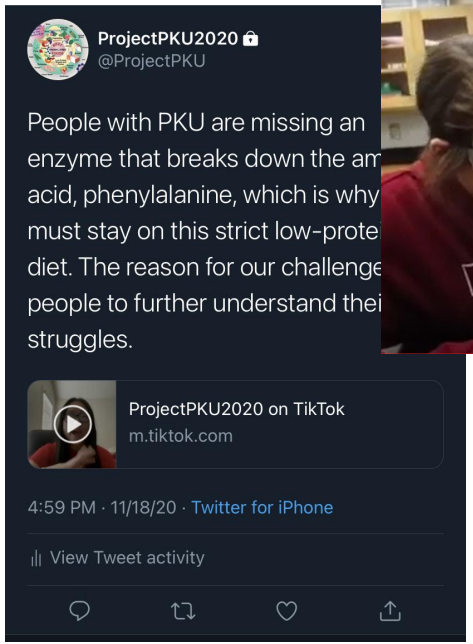
Integrated SPIRE pathway vs Accelerated SPIRE pathway

	9th Grade	10th Grade	11th Grade	12th Grade
Integrated	Year-long Honors/Gifted Biology integrated with Language Arts and Oral/Written Communication	Year-long H/G Chemistry integrated with Language Arts and Foundations of Engineering	Year-long H/G Physics with embedded Concepts/Application of Engineering or Mechatronics	AP Biology, AP Chemistry, AP Physics, Robotics, Advanced Scientific Research, Mechatronics/AP Computer Science Principles, Anatomy & Physiology/Essentials of Health Sciences, Forensics Science, AP Environmental Science, CP Environmental Science
	Or	*Or*	*Or*	
Accelerated	Honors/Gifted Chemistry with embedded Foundations of Engineering	AP Biology with embedded Scientific Research	AP Physics C with embedded Concepts and Applications of Engineering	

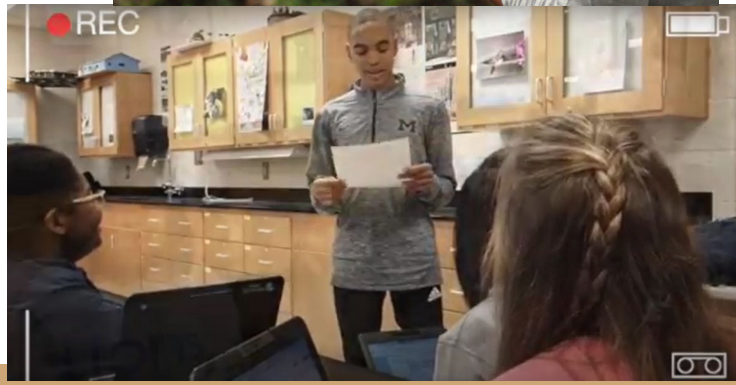
9th Integrated

Biology, Language Arts, and Oral/Written Communication

Projects centered around real issues facing our school and community, creative design challenges, lab experiments, purposeful writing, presentations, model creation



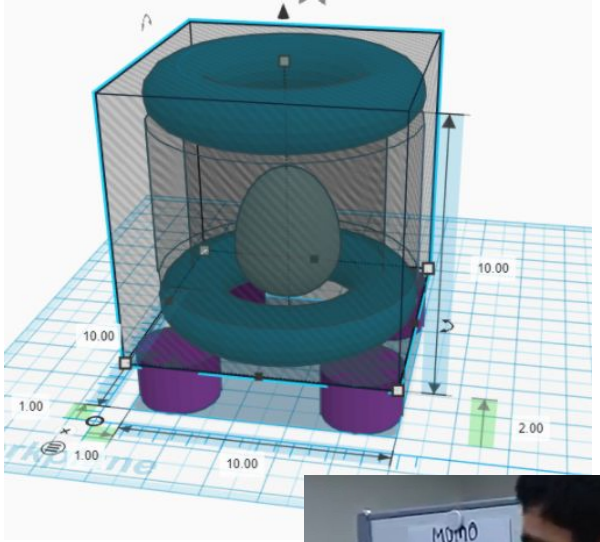
Project Examples: social media campaign for genetic disorder, develop solution to problem using biotechnology, develop a solution to antibiotic resistance, persuade students to purchase/consume certain drinks, solve an environmental problem

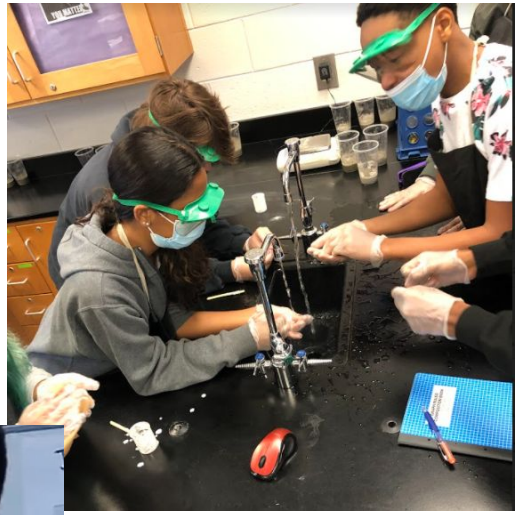


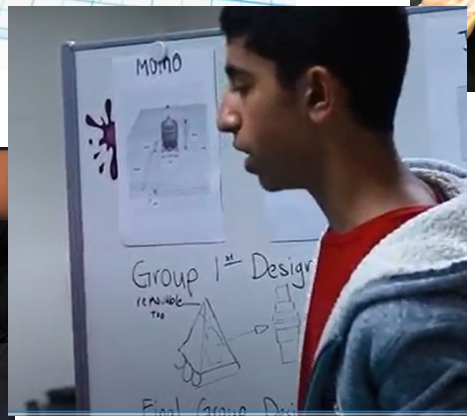
10th Integrated

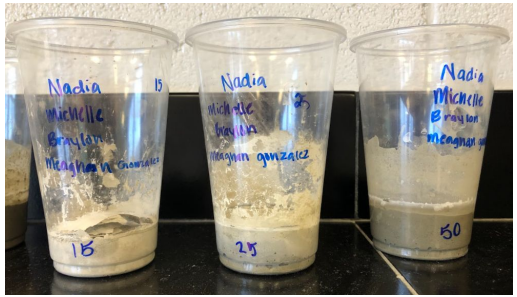
Chemistry, Language arts, Foundations of Engineering

Essays, podcasts, documentaries, presentations, websites, experiment design, engineering reports, build prototypes, CAD design









11th Integrated

Physics, Engineering Applications 1 & 2

CAD design, build prototypes in D3 space, electronics, woodworking, 3D printing, manufacturing, computer programming

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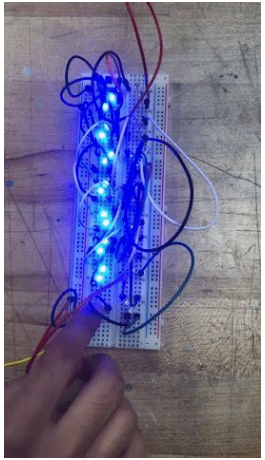

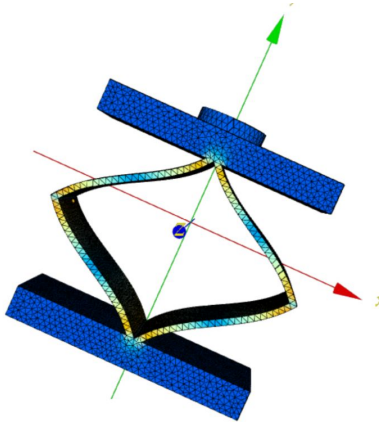

12th grade

Mechatronics and Computer Science- focuses on the integration of mechanical, electronic and electrical engineering systems

SPIRE Intern in D3 Space- design and build solutions to problems within PRHS

STEM Internship- intern with a company in a STEM field

Other 4th year sciences: AP Biology, AP Chemistry, AP Physics, AP Environmental Science, Forensics, Anatomy/Physiology, Robotics

Pathway Completion

Completion of 3 engineering classes:

Course	Accelerated Pathway	Integrated Pathway
Foundations of Engineering	Embedded in 9th grade Chemistry	Embedded in 10th grade Chemistry
Engineering Concepts	Embedded in 11th grade AP Physics C	Embedded in 11th grade Honors Physics
Engineering Applications	Embedded in 11th grade AP Physics C	Embedded in 11th grade Honors Physics

Completion of Engineering Pathway Exam

Post High School

- College application essay
- Teacher recommendation letters

Exit Survey