



Woodstock High School STEM Program



What is STEM?

- X STEM = Science, Technology, Engineering, Mathematics
- X Restructuring of what we teach and how students learn
- X Promotion of scientific inquiry and engineering design
- X Integration of instruction embedded with technology
- X Offer advanced and unique opportunities for WHS students



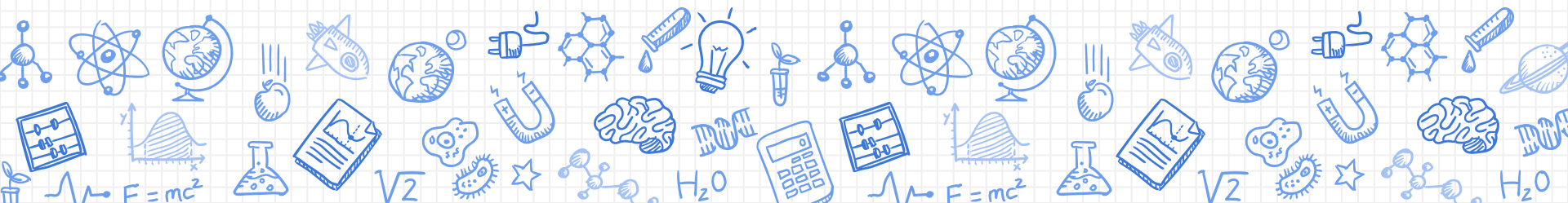
Why STEM?

Improve learning, achievement, and rigor at WHS.

Serve students interested in STEM fields.

Provide unique opportunities for students.

State certified STEM program.



A group of students in a classroom are working on a project. In the foreground, a boy in a green shirt is looking at a book, while a girl in a green shirt is working on a model made of sticks and white balls. Other students are visible in the background, some standing and some sitting at tables, all engaged in various activities. The classroom is filled with books, papers, and other educational materials.

- X Revised pathways for 2019-20 based on what we learned this year
- X Increase number of students in our STEM pathways
- X Continue to build and expand our partnerships

WHS STEM CURRICULUM – ADVANCED ACADEMICS: Math and Science

	8 th Grade	9 th Grade	10 th Grade	11 th Grade	12 th Grade
Math	Honors Accelerated Algebra I/Geometry	STEM Honors Accelerated Geometry/Algebra II	STEM Honors Accelerated Pre-Calculus	AP Calculus AB or AP Calculus AB/BC	GA Tech Distance Learning or Honors Multivariable Calculus or AP Statistics
Science	Physical Science	STEM AP Biology	STEM Honors Chemistry	AP Physics C: Mechanics	Any AP Science
Lit	8 th Grade Literature	STEM Honors 9 th Lit	STEM Honors 10 th Lit	Honors American Lit or AP Lang	Honors Adv Comp or AP Lit
Social Studies	8th Grade Social Studies	AP Human Geography, Social Studies Elective, or Other Elective	World History (CP, Honors, or AP)	US History (CP, Honors, or AP)	Gov and Econ (CP or AP)
Elective	Some students earn Foreign Lang Credit at WMS or FMS	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective
Elective	Health/Personal Fitness can be taken online in summer to open elective spot	Health and Personal Fitness	AP Physics 1 or Other Elective	AP Chemistry, AP Statistics or Other Elective	AP Chemistry, AP Statistics or Other Elective

Other Requirements: at least two years of sequential foreign language; active participation in at least one STEM competition group/club; STEM related internship or capstone project in 12th grade; Health and Personal Fitness must be completed prior to graduation – can be taken online in summer to open elective spot

Biotchnology Pathway

X Designed for students with a passion for science and/ or engineering with a focus on research.

X Prerequisites:

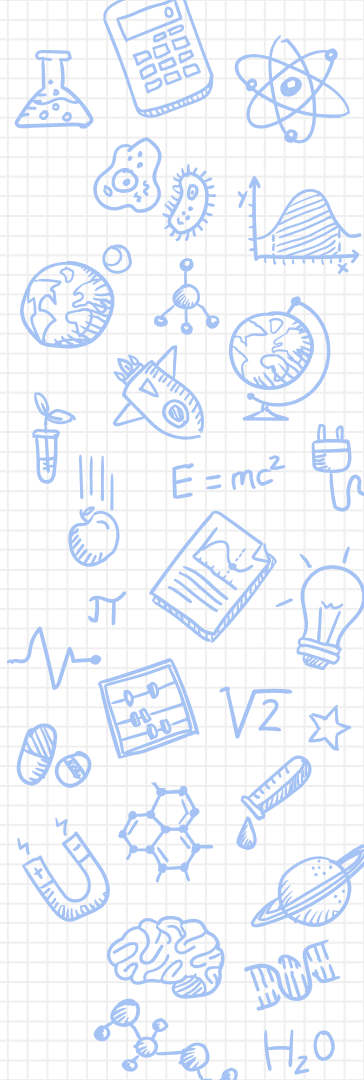
X Completion of Algebra 1 in 8th Grade

X Completion of High School Physical Science in 8th Grade

X Recommendation to take Honors Biology or invitation to take AP Biology in 9th grade

X Recommendation to take Honors 9th Literature

X Recommendation to take an Honors Geometry or higher in 9th Grade





WHS STEM CURRICULUM – BIOTECHNOLOGY



	8 th Grade	9 th Grade	10 th Grade	11 th Grade	12 th Grade
Math	Honors Algebra 1 or Higher	Honors Geometry or Higher	Any Honors Math Class	Any Honors/AP Math Class (AP Statistics recommended anytime after Honors Alg. 2)	Any Honors/AP Math Class (AP Statistics recommended anytime after Honors Alg. 2)
Science	Advanced Science or Physical Science	Honors or AP Biology	Honors Chemistry	Honors or AP Physics	Any AP Science
Literature	8 th Grade Literature	STEM Honors 9 th Lit	STEM Honors 10 th Lit	Honors American Lit or AP Lang	Adv Comp or AP Lit
Social Studies	8th Grade Social Studies	AP Human Geography, Social Studies Elective, or Health/Personal Fitness	World History (CP, Honors, or AP)	US History (CP, Honors, or AP)	Gov and Econ (CP or AP)
Elective	Some students earn Foreign Lang Credit at WMS or FMS	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective
Research	Health and Personal Fitness can be taken online in summer to open elective spot.	Scientific Research I	Scientific Research II	Scientific Research III	Scientific Research IV (Internship)

Other Requirements: at least two years of sequential foreign language; active participation in at least one STEM competition group/club; STEM related internship or capstone project in 12th grade; Health and Personal Fitness must be completed prior to graduation. **AP Statistics is highly recommended.**

Engineering Pathway

X Designed for students with an interest in engineering.

X Prerequisites:

X Completion of Advanced Science or High School Physical Science in 8th Grade

X Completion of a High School Math Course (recommended) or Advanced Math in 8th Grade

X Recommendation to take Honors Biology in 9th Grade

X Recommendation to take Honors Algebra 1 or higher in 9th Grade





WHS STEM CURRICULUM – ENGINEERING



	8 th Grade	9 th Grade	10 th Grade	11 th Grade	12 th Grade
Math	Advanced Math 8 or Higher	Honors Algebra 1 or Higher	Any Honors Math Class	Any Honors/AP Math Class	Any Honors/AP Math Class
Science	Advanced Science or Physical Science	STEM Honors Biology	STEM Honors Chemistry	STEM Honors Physics	AP Computer Science
Literature	8 th Grade Literature	STEM Honors 9 th Lit	STEM Honors 10 th Lit	Honors American Lit or AP Lang	Adv Comp or AP Lit
Social Studies	8th Grade Social Studies	AP Human Geography, Social Studies Elective, or Health/Personal Fitness	World History (CP, Honors, or AP)	US History (CP, Honors, or AP)	Gov and Econ (CP or AP)
Elective	Some students earn Foreign Lang Credit at WMS or FMS	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective	Foreign Language or Other Elective
Engineering	Health and Personal Fitness can be taken online in summer to open elective spot	STEM Engineering Foundations	STEM Engineering Concepts	STEM Engineering Applications	Engineering Internship or STEM-related course

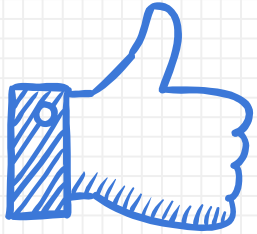
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Further questions? Who to contact:

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WHS STEM Website



THANK YOU!
Any questions?

