

Environmental Engineering



Environmental engineering focuses on protecting people from the effects of adverse environmental effects, such as pollution, as well as improving environmental quality. Environmental engineers can assess the impact of engineering projects on air, water, soil, and noise levels; plan and design equipment and processes for safe treatment and disposal of waste material; and assess what may cause long-term problems for the environment. They also use engineering principals to solve environmental problems.

Gar-Field's Environmental Engineering has two pathways depending on student strengths and interests; both include the Personal and Professional Skills course in 12th grade.



IMPORTANT DATES



November 1, 2023

PWCS Application Portal Opens

November 15, 2023

GFHS Special Programs Info Session

7:00 PM in the GFHS Library

January 9, 2024

GFHS Special Programs

Virtual Info Session

7:00 PM via Zoom

February 1, 2024

PWCS Application Deadline

Mid - Late February 2024

Program Decisions Released

March 5, 2024

Families must declare their intent to participate in the accepted Specialty Program



Culinary



The Culinary Program prepares students to practice the managerial, production, and service skills used in food establishments and related food industry occupations. Students begin to prepare for occupations in the food service industry, such as chef/cook, baker/pastry chef, and hospitality worker.

Throughout the program, students have the opportunity to plan, select, store, purchase, prepare and serve food and food products; study basic nutrition, sanitation, and food safety; learn the use and care of commercial equipment; and practice the operation of institutional food establishments. Students also have an opportunity to practice serving and dining room management including real-world experiences working cooperatively with various community food establishments and local business owners.

This two-year program of study begins in 11th grade and includes:

- Culinary Arts I
- Culinary Arts II

(Nutrition and Wellness and Introduction to Culinary)

Note: Applications for this program are open for rising 11th and 12th grade students as a transport program. Students are eligible to transfer for this program in grade 9 if they apply for the IB Program with the intention of using Culinary as their career related study for the IB Career Program.



Plumbing



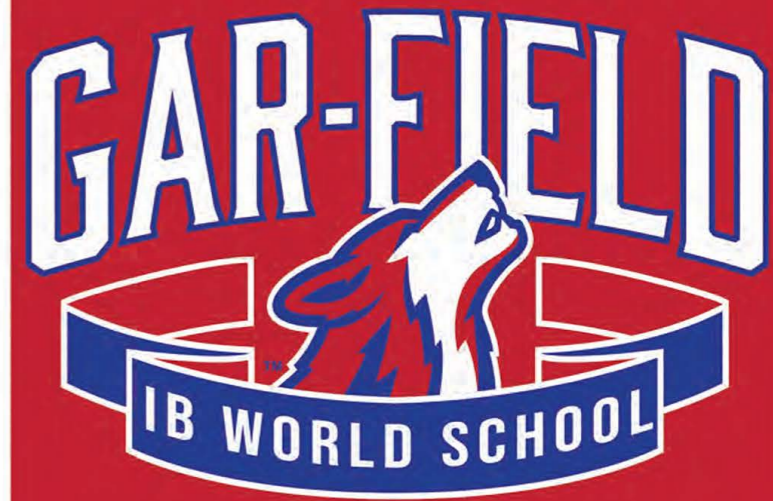
Plumbing students learn marketable, job-specific skills and workplace readiness skills to help them succeed in the plumbing industry. Safety and equipment care is emphasized while students learn to install and repair pipes and plumbing fixtures according to construction drawings and specifications. Students completing the two-year plumbing sequence have the opportunity to demonstrate workplace readiness skills and earn a professional certification through industry assessment. Students may choose to enter the job market directly or continue their studies via a college program, technical school, or apprenticeship program.

The four-year program of study includes:

- Introduction to Engineering and Design (PLTW)
- Construction Technology
- Plumbing I
- Plumbing II

Note: Applications for this program are open for rising 9th, 10th, and 11th grade students.

Lead Instructor
Master Plumber
Michael Carter
CarterMA1@pwcs.edu



SPECIAL PROGRAM

OPPORTUNITIES



Gar-Field High School

Principal: Matthew Mathison
14000 Smoketown Road
Woodbridge, Va. 22192



Message from the Principal

At Gar-Field HS, we are passionate about making sure each of our students graduate college, career or trade ready. No matter your passions or interests, we have programs to serve all of our students. I invite you to come to our school specific information nights, visit our school website, and ask questions about building a 4-year plan that is in line with your goals and vision of your future.

Mr. Matthew Mathison, Principal GFHS

Law & Public Safety



The Law and Public Safety Program (LPSP) of study focuses on methods used by public safety leaders to protect a democratic society. The Law and Public Safety Program at Gar-Field HS offers two distinct pathways – Criminal Justice or Military Science (MCJROTC).

The Criminal Justice program is designed for students who are considering a career in criminal justice and/or want to learn more about the criminal justice system from a law enforcement perspective. Students will apply knowledge with courts, corrections and law enforcement through practical scenarios involving up to date trends with public safety. The course prepares students to understand the knowledge of the three major components of the criminal justice system with the police, courts and corrections while also gaining a working knowledge of the potential careers in these fields.

Criminal Justice Pathway

Lead Instructor

Jamel Perkins

PerkinJE1@pwcs.edu

Military Science Pathway

Lead Marine Instructor

LtCol E.W. Kelly, Sr. USMC (Ret)

KellyE@PWCS.EDU



Marine Corps JROTC

The Marine Corps Junior ROTC program prepares "high school students for leadership roles while making them aware of their rights, responsibilities, and privileges as American citizens." The MCJROTC program produces successful students and productive adults while fostering a constructive and disciplined learning environment.

Areas of study include:

- Leadership
- Citizenship
- Personal Growth and Responsibility
- Public Service
- Career Development
- General Military Subjects

The GFHS MCJROTC Program has a long history of service and community involvement. Cadets have opportunities to participate in many MCJROTC extracurricular, after-school and summer programs.

Lead Marine Instructor
LtCol E.W. Kelly, Sr. USMC (Ret)
KellyE@PWCS.EDU



Computer Science



The most important essential life skill taught in computer science is problem solving. Students study the design, development and analysis of software and hardware to solve problems in a variety of business, scientific and social contexts. Because computers solve problems to serve people, there is a significant human side to the GFHS Computer Science Program, which offers a 4-year pathway:

9th Advanced Computer Math
(Introduction to JAVA)

10th Advanced Placement Computer Science A

11th IBDP SL Computer Science

12th IBDP HL Computer Science

Note: This is not a transfer program, but transfer students can apply to the IB Program at GFHS and indicate they want to participate in our Computer Science Program.

Lead Instructor
Larry Baker
BakerLG@pwcs.edu



International Baccalaureate

The International Baccalaureate (IB) Programs at Gar-Field High School offers students rigorous academic programs focused on international-mindedness and global connections.

While various levels of student participation are available, the IB Diploma Program (DP) centers around the full IB Diploma where students complete internal and external exams in six subject areas; complete a creativity, activity, and service portfolio; write a 4,000 word extended essay; and complete a seminar course entitled Theory of Knowledge.

In addition to the IB DP, we offer the IB Career-related Program (CP). The IB CP centers around a certificate where students complete internal and external exams in two IB DP classes, complete a service learning portfolio, complete a language development portfolio, write a reflective project, complete an approved career-related sequence of courses, and complete a seminar course entitled Personal and Professional Skills.

Participation in the programs range from students earning individual certificates in subjects of strength and interest to the full IB Diploma or the Career-related certificate. Juniors and seniors enroll in IB DP courses that are externally moderated and assess by the IBO.

Freshmen and sophomores participate in the IB Middle Years Program (IB MYP), a framework for instruction in all academic areas that provides opportunities for Advanced courses in preparation for the IB Diploma and Career-related Programmes. Participation in the MYP ranges from students taking courses in subjects of strength and interest to taking the full range of Adv MYP occurs in preparation for the full IB Diploma or the Career-Related certificate studies.

Admin. Coordinator of
International Baccalaureate
Brian Bassett
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