

**U.S. Department of Education**  
**2014 National Blue Ribbon Schools Program**

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[X] Public or [ ] Non-public

For Public Schools only: (Check all that apply) [ ] Title I [ ] Charter [X] Magnet [ ] Choice

Name of Principal Mr. Murray G. Parker, III

(Specify: Ms., Miss, Mrs., Dr., Mr., etc.) (As it should appear in the official records)

Official School Name Western School of Technology and Environmental Science

(As it should appear in the official records)

School Mailing Address 100 Kenwood Avenue

(If address is P.O. Box, also include street address.)

City Baltimore State MD Zip Code+4 (9 digits total) 21228-3610

County Baltimore State School Code Number\* 030175

Telephone 410-887-0840 Fax 410-887-1024

Web site/URL http://westernhs.bcps.org E-mail mparker@bcps.org

Twitter Handle \_\_\_\_\_ Facebook Page \_\_\_\_\_ Google+ \_\_\_\_\_

YouTube/URL \_\_\_\_\_ Blog \_\_\_\_\_ Other Social Media Link \_\_\_\_\_

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I-Eligibility Certification), and certify that it is accurate.

Date \_\_\_\_\_  
\_\_\_\_\_  
(Principal's Signature)

Name of Superintendent\*Dr. S. Dallas Dance E-mail: ddance@bcps.org  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

District Name Baltimore County Public Schools Tel. 410-887-4281

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I-Eligibility Certification), and certify that it is accurate.

Date \_\_\_\_\_  
\_\_\_\_\_  
(Superintendent's Signature)

Name of School Board  
President/Chairperson Mr. Lawrence E. Schmidt, Esq.  
(Specify: Ms., Miss, Mrs., Dr., Mr., Other)

I have reviewed the information in this application, including the eligibility requirements on page 2 (Part I-Eligibility Certification), and certify that it is accurate.

Date \_\_\_\_\_  
\_\_\_\_\_  
(School Board President's/Chairperson's Signature)

*\*Non-public Schools: If the information requested is not applicable, write N/A in the space.*

## **PART I – ELIGIBILITY CERTIFICATION**

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**Include this page in the school’s application as page 2.**

The signatures on the first page of this application (cover page) certify that each of the statements below concerning the school’s eligibility and compliance with U.S. Department of Education, Office for Civil Rights (OCR) requirements is true and correct.

1. The school configuration includes one or more of grades K-12. (Schools on the same campus with one principal, even a K-12 school, must apply as an entire school.)
2. The school has made its Annual Measurable Objectives (AMOs) or Adequate Yearly Progress (AYP) each year for the past two years and has not been identified by the state as “persistently dangerous” within the last two years.
3. To meet final eligibility, a public school must meet the state’s AMOs or AYP requirements in the 2013-2014 school year and be certified by the state representative. Any status appeals must be resolved at least two weeks before the awards ceremony for the school to receive the award.
4. If the school includes grades 7 or higher, the school must have foreign language as a part of its curriculum.
5. The school has been in existence for five full years, that is, from at least September 2008 and each tested grade must have been part of the school for the past three years.
6. The nominated school has not received the National Blue Ribbon Schools award in the past five years: 2009, 2010, 2011, 2012, or 2013.
7. The nominated school has no history of testing irregularities, nor have charges of irregularities been brought against the school at the time of nomination. The U.S. Department of Education reserves the right to disqualify a school’s application and/or rescind a school’s award if irregularities are later discovered and proven by the state.
8. The nominated school or district is not refusing Office of Civil Rights (OCR) access to information necessary to investigate a civil rights complaint or to conduct a district-wide compliance review.
9. The OCR has not issued a violation letter of findings to the school district concluding that the nominated school or the district as a whole has violated one or more of the civil rights statutes. A violation letter of findings will not be considered outstanding if OCR has accepted a corrective action plan from the district to remedy the violation.
10. The U.S. Department of Justice does not have a pending suit alleging that the nominated school or the school district as a whole has violated one or more of the civil rights statutes or the Constitution’s equal protection clause.
11. There are no findings of violations of the Individuals with Disabilities Education Act in a U.S. Department of Education monitoring report that apply to the school or school district in question; or if there are such findings, the state or district has corrected, or agreed to correct, the findings.

## PART II - DEMOGRAPHIC DATA

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All data are the most recent year available.

**DISTRICT** (Question 1 is not applicable to non-public schools)

1. Number of schools in the district (per district designation):
- 108 Elementary schools (includes K-8)
  - 27 Middle/Junior high schools
  - 24 High schools
  - 3 K-12 schools
- 162 TOTAL

**SCHOOL** (To be completed by all schools)

2. Category that best describes the area where the school is located:
- Urban or large central city
  - Suburban with characteristics typical of an urban area
  - Suburban
  - Small city or town in a rural area
  - Rural
3. 3 Number of years the principal has been in her/his position at this school.
4. Number of students as of October 1 enrolled at each grade level or its equivalent in applying school:

Grade	# of Males	# of Females	Grade Total
PreK	0	0	0
K	0	0	0
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	0	0
9	131	115	246
10	107	137	244
11	97	131	228
12	80	131	211
<b>Total Students</b>	415	514	929

5. Racial/ethnic composition of the school:
- 0 % American Indian or Alaska Native
  - 10 % Asian
  - 74 % Black or African American
  - 3 % Hispanic or Latino
  - 0 % Native Hawaiian or Other Pacific Islander
  - 11 % White
  - 2 % Two or more races
  - 100 % Total**

(Only these seven standard categories should be used to report the racial/ethnic composition of your school. The Final Guidance on Maintaining, Collecting, and Reporting Racial and Ethnic Data to the U.S. Department of Education published in the October 19, 2007 *Federal Register* provides definitions for each of the seven categories.)

6. Student turnover, or mobility rate, during the 2012 - 2013 year: 1%

This rate should be calculated using the grid below. The answer to (6) is the mobility rate.

<b>Steps For Determining Mobility Rate</b>	<b>Answer</b>
(1) Number of students who transferred <i>to</i> the school after October 1, 2012 until the end of the school year	0
(2) Number of students who transferred <i>from</i> the school after October 1, 2012 until the end of the 2012-2013 school year	7
(3) Total of all transferred students [sum of rows (1) and (2)]	7
(4) Total number of students in the school as of October 1	926
(5) Total transferred students in row (3) divided by total students in row (4)	0.008
(6) Amount in row (5) multiplied by 100	1

7. English Language Learners (ELL) in the school: 0 %  
0 Total number ELL  
 Number of non-English languages represented: 0  
 Specify non-English languages:
8. Students eligible for free/reduced-priced meals: 35 %  
 Total number students who qualify: 324

If this method is not an accurate estimate of the percentage of students from low-income families, or the school does not participate in the free and reduced-priced school meals program, supply an accurate estimate and explain how the school calculated this estimate.

9. Students receiving special education services: 4 %  
38 Total number of students served

Indicate below the number of students with disabilities according to conditions designated in the Individuals with Disabilities Education Act. Do not add additional categories.

18 Autism	0 Orthopedic Impairment
0 Deafness	3 Other Health Impaired
0 Deaf-Blindness	14 Specific Learning Disability
1 Emotional Disturbance	1 Speech or Language Impairment
1 Hearing Impairment	0 Traumatic Brain Injury
0 Mental Retardation	0 Visual Impairment Including Blindness
0 Multiple Disabilities	0 Developmentally Delayed

10. Use Full-Time Equivalents (FTEs), rounded to nearest whole numeral, to indicate the number of personnel in each of the categories below:

	<b>Number of Staff</b>
Administrators	3
Classroom teachers	67
Resource teachers/specialists e.g., reading, math, science, special education, enrichment, technology, art, music, physical education, etc.	0
Paraprofessionals	9
Student support personnel e.g., guidance counselors, behavior interventionists, mental/physical health service providers, psychologists, family engagement liaisons, career/college attainment coaches, etc.	5

11. Average student-classroom teacher ratio, that is, the number of students in the school divided by the FTE of classroom teachers, e.g., 22:1 14:1

12. Show daily student attendance rates. Only high schools need to supply yearly graduation rates.

<b>Required Information</b>	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009
Daily student attendance	97%	97%	97%	97%	96%
High school graduation rate	99%	99%	98%	99%	100%

13. **For schools ending in grade 12 (high schools)**

Show percentages to indicate the post-secondary status of students who graduated in Spring 2013

<b>Post-Secondary Status</b>	
Graduating class size	222
Enrolled in a 4-year college or university	67%
Enrolled in a community college	21%
Enrolled in career/technical training program	0%
Found employment	4%
Joined the military or other public service	1%
Other	7%

14. Indicate whether your school has previously received a National Blue Ribbon Schools award.

Yes                      No X

If yes, select the year in which your school received the award.

## **PART III – SUMMARY**

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Western School of Technology and Environmental Science is an economically and culturally diverse magnet high school located on the west side of Baltimore County, Maryland. The school, comprised of a non-diploma bound autism program and eleven magnet programs, is consistently recognized as a top performing high school in the region and nation by Baltimore Business Journal, The Washington Post, US News & World Report, and Newsweek. In December 2013, the school was designated a Maryland Blue Ribbon School of Excellence. Western Tech, with an enrollment of 929 students, is proving that “all means all” when it comes to education.

As a magnet high school and recognized Maryland Green School, students and parents are drawn to the challenging and supportive learning environment that exists at Western Tech. The mission of Western Tech is “to provide students with challenging academic courses, cutting-edge technological career programs, and experiential environmental science programs in order to achieve success in higher education and in the workplace.” Students are admitted based on the grades they earn in middle school and their performance on a magnet program assessment.

At the core of Western Tech’s strength is its diversity. The student population includes speakers of many languages, including Urdu, Spanish, Hindi, Igbo, Tagalog, Yoruba, Arabic, and Punjabi. The racial/ethnic composition of the student body is 74% African-American, 11% White, 10% Asian, 3% Hispanic, and 2% two or more races. Additionally, 35% of students qualify for the federal Free and Reduced Priced Meals (FARMS) program. Western Tech’s diversity is celebrated each year during the Cultural Coalescence, a school-wide event that immerses the student body in the traditions of various cultures from around the world through interactive activities and performances.

The school has consistently met Adequate Yearly Progress. Ninety-nine percent of the Class of 2013 demonstrated proficiency on all four of the Maryland High School Assessments (HSAs): English, Algebra/Data Analysis, Biology, and Government. Participation and pass rates in Advanced Placement (AP) reached historic highs for the school in 2012-2013. Overall, 248 students took 548 AP exams and achieved a pass rate of 68%. Of the 548 AP exams administered in 2012-2013, 327 were taken by African-American students who achieved a 63% pass rate. Through hard work and an unwavering commitment to academic excellence, Western Tech is closing the achievement gap and preparing all of its students for higher education.

In terms of career readiness, Western Tech students benefit greatly from the many partnerships with businesses, colleges, and government agencies. Each of the Career and Technology Education (CTE) programs convenes advisory meetings with business representatives to ensure that programs are aligned with industry standards. Many students also compete and win in SkillsUSA, a career and technical organization comprised of students and industry professionals. Juniors attend a school-sponsored Career Fair that requires them to produce a portfolio and to participate in actual interviews. Many students gain a job and/or internship through the Career Fair. In their senior year, many students opt to participate in internships related to their magnet programs. The internship program serves as a great transition to the workforce and adulthood for the students of Western Tech.

Athletics also plays a major role in the school community. Western Tech’s athletic teams have earned or won multiple regional and state championships, including the state championships in Girls’ Basketball in 2013 and Girls’ Indoor Track and Field this year. The athletic prowess of the school is even more impressive considering that the school does not have any outdoor athletic facilities on its campus. In February 2014, for the first time in school history, four Western Tech Wolverines signed athletic scholarships. The common denominator for all four athletes is that they are strong students.

Western Tech has come a long way since its conversion from a traditional vocational center to a comprehensive magnet high school in 1993. In 2013, the school boasted a 97% attendance rate and a 99% graduation rate. Most importantly, all stakeholders understand the mission of the school and believe firmly

that college readiness and career readiness go hand-in-hand. This belief provides Western Tech graduates with a competitive edge and increased educational opportunities over their peers. The school community is extremely proud that 88% of its graduates attend college. Western Tech graduates attend such schools as The Community College of Baltimore County (CCBC), Princeton, Johns Hopkins, Hampton, Howard, Temple, Georgetown, the University of Maryland Baltimore County (UMBC), and the University of Maryland at College Park.

Members of the Western Tech community take great pride in their school. The “WT” is proudly displayed throughout the school and has come to represent academic excellence. The success of the school is predicated on high expectations for all students and is a direct result of the hard work and collaborative efforts of students, parents, faculty, and staff.

## **PART IV – INDICATORS OF ACADEMIC SUCCESS**

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### **1. Assessment Results:**

a) Maryland measures high school academic progress each year by administering the Maryland High School Assessments (HSAs) and additional college readiness tests, such as Advanced Placement (AP) exams and the Scholastic Aptitude Test (SAT).

Passing the HSAs is one of Maryland's graduation requirements that began with students who entered Grade 9 in 2005. The HSAs are given in four content areas—English, Algebra/Data Analysis, Biology, and Government—and have established cut scores (the Government HSA was reinstated in 2012-2013). The English HSA is administered to Grade 10 students, while the other three required assessments are administered in Grade 9. For HSAs, students scoring above the passing scale score are considered proficient, and those below are considered basic. There is no distinction made between advanced and proficient as the Maryland State Department of Education reports only “percent proficient” on these assessments which are given as end-of-course tests.

The HSAs in English, Algebra/Data Analysis, and Biology also serve to meet the federal testing requirements in reading, mathematics, and science and are classified as Maryland School Assessments (MSAs). To meet federal reporting purposes, HSA test results are classified as advanced, proficient, or basic. The data tables in this application reflect the federal reporting requirements even though the motivation and standard for Maryland high school students is to pass or score “proficient” rather than “advanced” on the HSAs.

b) Western Tech continues to demonstrate academic excellence in HSA performance. The school's overall 2012-2013 HSA pass rate in English was 99% (up from 93% in 2008-2009), and mathematics proficiency was 100% (up from 95% in 2008-2009). Western Tech pass rates in Biology (99%) and Government (99%) were also exceedingly high.

The performance of Western Tech students is even more impressive when examined through the achievement gap lens. In English, the number of FARMS students scoring proficient/advanced increased from 91% in 2008-2009 to 99% in 2012-2013. During the same time period, the percentage of FARMS students scoring proficient/advanced in Algebra/Data Analysis also increased, from 87% to 100%. Success for African-American students remained consistently strong as well. In 2012-2013, 99% of the school's African-American students scored proficient/advanced in English and 100% in Algebra/Data Analysis.

Another significant factor in the success of Western Tech's performance on the HSAs is the school's commitment to the AP program. Simply stated, the AP program is the “academic engine” of the school. Students are exposed to rigorous skill development in the ninth and tenth grades in preparation for advanced placement courses in the eleventh and twelfth grades. The vertical teaming efforts focus on the basics of purposeful reading, writing, and communication. By doing so, the level of academic rigor has increased dramatically in HSA courses.

In Maryland, the percentage of public school graduates who have passed at least one AP exam has increased each year for over a decade. The College Board recently released the 2013 AP scores, and once again Maryland ranked number one in the nation with a percentage of nearly 30%. Boosting the state's high ranking is the hard work of Western Tech's students and teachers. In 2013, 36% of Western Tech graduates passed at least one AP exam.

It is clear that the focus on AP is working. AP participation and pass rates reached the highest levels in school history in 2013. Since 2008-2009, the number of students taking an exam increased by 64% (from 159 students to 248 students), the exam count increased by 58% (from 320 exams to 548 exams), and the pass rate increased by 7% (from 61% to 68%). The performance of the school's African-American subgroup was once again a point of pride in 2013. African-American students at Western Tech took 327 exams and achieved a 63% pass rate.

A school-wide focus on the SAT has also contributed to strong HSA scores and increased SAT performance. The SAT overall composite mean score of 1490 in 2013 represented a 40-point increase over that of the Class of 2012. Significant progress was also made in closing the achievement gap for Western Tech's African-American students, who in 2013 earned a composite mean score of 1460, representing a 58-point increase over the previous year. To put this gain in perspective, 1278 was the 2013 national average for African-American students. The upward trend continues for the Class of 2014. For the first time, the school is projected to eclipse the 1498 national average for all students, and performance for African-American students is projected to increase by at least 25 points.

## **2. Using Assessment Results:**

The principal believes strongly that students, parents, and teachers have to work together in order to maximize the potential of students. The key to working together is open and honest communication amongst all stakeholders. This communication begins immediately with the arrival of each ninth grader and the development of his/her schedule. MSA results for reading and math, ReadStep scores provided by the College Board, and course work in eighth grade are analyzed thoroughly to determine the appropriate schedule for each student. Additionally, assessment data, interviews, and recommendations are used to invite incoming ninth graders to participate in AVID (Advancement Via Individual Determination), an academic support program that assists first-generation college-bound students.

Throughout the school year, individual student progress is reported to parents through Edline (an electronic grading system), interim reports, and report cards. Parent-teacher conferences held each marking period also provide parents and teachers an opportunity to speak in person regarding individual student progress. Parent programs such as Ninth Grade Orientation, Back-to-School Night, and American Education Week as well as PTSA meetings provide ample opportunities for the school to communicate with parents regarding assessment programs and outcomes. Western Tech also shares all assessment data with the school community through Connect-Ed (telephone messages from the principal) and the school website, <http://westernhs.bcps.org>.

The department chair for each HSA-tested area holds periodic meetings with his/her teachers to analyze unit tests and quarterly Benchmark assessments. Teachers then plan additional classroom strategies to address specific weaknesses. In addition, based on students' instructional needs, each tested area provides after-school tutoring sessions prior to the test administration to ensure that all students are prepared to meet with success. Each school year, Maryland prepares a letter with High School Assessment results for each student and their parents. Additionally, the state circulates test data through local newspapers and their website, <http://mdk12.org>.

All students in grades 9-11 take the Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test (PSAT/NMSQT). The results are disseminated to parents and students and provide valuable information regarding college and career readiness. Furthermore, the Western Tech faculty employs AP Potential to appropriately place students in academically challenging courses. The AP Potential program has been effective in increasing the number of qualified but underrepresented students in AP courses. The College Board also offers the Summary of Answers and Skills (SOAS) report, which the Leadership Team analyzes extensively to identify strengths and weaknesses in reading comprehension, vocabulary development, grammar, language usage, and mathematics. Finally, AP teachers use the AP Instructional Planning Reports to determine adjustments that may be needed from year to year.

## **3. Sharing Lessons Learned:**

The faculty and staff of Western Tech make decisions based on the best interests of students. Reinforcing this premise, faculty and staff are always looking for ways to improve the service provided to students. Thus, it is the belief of the entire school community that success and best practices should be shared.

The expertise of Western Tech teachers is called upon frequently to write curricula, lead professional development efforts, serve as mentors, and host visitors from around the world. Western Tech science teachers have written curricula for Gifted and Talented (GT) Chemistry, Ecology, and Environmental Science, and many within the department have presented at county and state functions. For example, the forensic science teacher led a presentation about the use of technology in the classroom during the school system's August professional development day, and the school's Environmental Technology teacher presented at a state-level conference on environmental science. An important aspect of sharing lessons learned is serving the next generation of teachers. The Western Tech faculty has positively influenced countless student interns as they have started their teaching careers. Finally, over the past several years, the school has had the privilege of hosting teachers from Japan, China, and the United Kingdom.

Maryland Safe and Supportive Schools (MDS3) is a program awarded to the Maryland State Department of Education by the United States Department of Education to help improve the climate of Maryland high schools. As a member of this program, Western Tech was called upon to share the school's "Club Day" concept with participating schools from across the state at the annual summer conference. "Club Day" allows students to get involved in a club or organization during the school day that they would not otherwise be able to participate in because of transportation issues.

This year, Western Tech's principal was called upon to mentor a new principal to Baltimore County Public Schools (BCPS). The new principal was assigned to a struggling high school with a large minority and FARMS population. The two principals have forged a strong relationship through which strategies regarding school leadership, teaching, and learning in general are exchanged weekly. Both principals and schools have benefitted greatly from the exchange of ideas.

#### **4. Engaging Families and Community:**

Western Tech's Ninth Grade Team ensures that each student makes the important transition from middle to high school. The team hosts a social for all incoming freshmen and their families in May of their eighth-grade year and an orientation in August to welcome and introduce the incoming class to their school, their teachers, and the Western Tech way. The team also provides to parents a bi-monthly newsletter, which includes information about upcoming school events, projects, and state assessments; suggestions to monitor student progress; and contact information for teachers. Finally, the team of teachers meets consistently throughout the year to provide students and parents necessary supports, such as organization and time management methods, tutoring, encouragement, reading strategies, and study skills.

The SAT Summer Institute provides rising seniors an opportunity to hone test-taking strategies. Students meet with a school counselor and the program's director to review their April SAT scores and then attend several summer sessions taught by Western Tech teachers that target their specific areas of weakness, allowing them to build strategies and improve their scores when they re-take the SAT in the fall. Additionally, students meet in small groups with a school counselor to facilitate the college search and application process. This valuable service meets a need that would otherwise not be met because of the financial constraints of many Western Tech families.

The Science Department hosts the Science Expo each spring. Unlike a traditional competition-based science fair, this event allows students to demonstrate all they have learned in their various science classes to their peers, family members, and other attendees. This very popular event draws visitors from elementary-age siblings to grandparents. These guests have the chance to observe and learn about reptiles and mammals, try their skills at physics-based games, view chemistry demonstrations, take part in anatomical dissections, or simply go on a nature hike and learn about the flora and fauna present on the school campus.

School counselors play a pivotal role by meeting regularly with students and family members to provide individualized counseling to develop and update a realistic academic plan. Annually, school counselors host Junior Parent Night, Senior Parent Night, and Financial Aid Night. Junior and Senior Parent Nights focus on the college-planning process and SAT preparation while Financial Aid Night provides parents with a comprehensive understanding of the Free Application for Federal Student Aid (FAFSA).

## **PART V – CURRICULUM AND INSTRUCTION**

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### **1. Curriculum:**

Western Tech offers all core subject area courses and courses that fulfill the requirements of eleven career programs. All curricular areas are aligned with state and county indicators and objectives. Western Tech currently offers sixteen Advanced Placement (AP) courses, representing all departments. The common characteristic for each content area is challenging and relevant classroom instruction.

The English curriculum is rich in literature, composition, and language at every level. As freshmen, students follow a genre approach adopted from College Board's Springboard Program. In grades 10-12, students study World Literature, American Literature, and British Literature, respectively. Instruction is offered at the standard, honors, and gifted and talented (GT)/AP levels. Students engage in problem-solving, academic discourse, and critical analysis of challenging texts. Additionally, an SAT Prep course is provided to all juniors. Seniors culminate their English experience with a long-term academic research project geared to ensure that each student is college and career ready.

The mathematics program is aligned with the National Council of Teachers of Mathematics standards and infuses the Common Core State Standards (CCSS) Mathematical Practices. Each course is taught as a part of a continuous thread of mathematics, creating a seamless mathematical experience for students throughout their four years. All students graduate with an experience in Algebra, Geometry, Trigonometry, and College Algebra, but many take more advanced mathematics, including AP Calculus AB and BC, AP Statistics, and AP Computer Science. The curriculum also makes natural connections to students' magnet programs, illustrating the value of taking rigorous mathematics every year during high school.

The Science Department aims to provide students with hands-on learning experiences in a variety of disciplines in order to prepare them for further scientific studies in college and allow them to discover how science relates to their everyday world. In addition to traditional lab-based experiences, students use technology through laptops, Lab-Pros, and Vernier data collection probes. Western Tech offers standard, honors, and GT levels of Biology, Chemistry, Physics, Environmental Science, Forensics, Anatomy and Physiology, and Microbiology; students seeking more rigorous coursework may take AP Environmental Science, AP Biology, AP Chemistry, and AP Physics.

The Social Studies Department strives to prepare graduates to compete in a multicultural and increasingly global society. Students, differentiated by ability level, are placed in standard, honors, or GT/AP courses. In grades 9-11, students take American Government, World History, and U.S. History, respectively. Seniors are required to take either a semester-long course on Economics and Public Issues or a year-long AP course that covers Macroeconomics and Microeconomics, ensuring that all graduates have basic economic skills. Additionally, African American History, Juvenile Justice, Psychology, AP Psychology, and Philosophy are available as electives.

Western Tech's Art Program offers courses from Fundamentals of Art to AP Studio Art 1-2, with the goal of teaching students to think critically and analytically about the observed world and to process their observations through personalized visual responses. The Music Program aims to create a culture of excellence through music that translates into all disciplines of learning. Students learn to listen critically, discern aesthetic judgments, and self-prescribe study solutions, all of which prepares them for the rigorous demands of college and the workplace.

Each student must complete in ninth grade a one-credit Physical Education course and in eleventh or twelfth grade a half-credit Health course, which serves as a great forum to discuss issues related to teens, such as pregnancy and the impact of drugs and alcohol. In addition, many students take the physical education electives such as Team Sports and Weight Training.

Exposure to technology is embedded in each magnet program as well as the one-credit course entitled Introduction to Engineering and Technology Concepts (IETC). This course is required of each freshman

and is designed to complement and support the development of skills and knowledge in the areas of science, technology, engineering, and math.

In this increasingly multicultural society, Western Tech students take at least two credits of Spanish or French in order to fulfill the University of Maryland entrance requirements. The school offers levels 1, 2, 3 (Honors), 4 (Honors), and 5 (AP). Immersion in the target language is used exclusively in our classes as this prepares students for use of the modern language in college and career.

## **2. Reading/English:**

The English Department uses data not only to drive instruction but also to determine the diverse needs of our students. Student placement is largely determined by MSA, PSAT, and HSA data in addition to work ethic and coursework. Students who are determined to be exceptionally independent participate in GT and AP programs. Emphasis is placed on building familiarity with a wide range of literature and the construction of argument; students close read to evaluate an author's style and participate in academic discussions to evaluate a text in order to reach that goal.

In the honors program, instruction is geared to ensure that prior to graduation students can participate in and pass an AP course in English (AP Language and Composition in the eleventh grade and AP Literature and Composition in the twelfth grade) or another discipline. In these courses, a strong focus is placed on academic and non-fiction reading, developing a sound and well-supported argument, and evaluating an author's work with few outside resources.

In the standard or college preparatory program, students are taught to examine and edit their own writing, shown how to employ a variety of test-taking skills and reading strategies, and introduced to a vertically aligned vocabulary. To assist students with IEPs and 504 plans, English teachers work closely with a special educator or para-professional in the classroom and in the Resource Room to provide support. The Resource Room is staffed by certified teachers or para-professionals and provides remedial or supplementary instruction in reading, language arts, math, and executive functioning skills.

The English Department places a strong emphasis on reading and writing for all students, regardless of ability. For example, students participate in a school-wide summer reading initiative. In addition, the English and Social Studies departments have designed a joint writing template to support student writing in both subjects, providing a shared message about writing and creating writers who produce cohesive, clear, and well-supported papers.

Furthermore, elective courses such as Creative Writing, Technical Writing, and Journalism provide students with a creative approach to writing and language, allowing them to examine language fully and experiment with the nuances of form, style, vocabulary, mode, and composition. Journalism I, II, and III students further apply their skills to publish annually six issues of *The Wolverine*, the school newspaper.

## **3. Mathematics:**

As Maryland transitions to the Common Core State Standards (CCSS), the mathematics curriculum that is being taught is a blend of the preexisting courses with a focus on implementing the CCSS Mathematical Practices into daily lessons. Since the Mathematical Practices are universally accepted as reasonable and logical behaviors employed by successful mathematics students when approaching a task, it is natural for the teachers in the mathematics department to promote these actions as students approach new learning. In fact, these practices translate well into many content areas and help to promote a healthy attitude about learning in general.

Rather than present the material in passive lectures, Western Tech mathematics teachers aim to incorporate more time for students to work through new concepts and discover relationships themselves. When students discover a mathematical relationship or build their own understanding of a concept as they work through a specific task, they tend to have a deeper understanding than when they are told how to interpret an idea.

Each teacher's focus is to carefully craft questions, examples, and counterexamples that will methodically lead the students to an accurate and complete understanding of critical concepts in each course. Once students have a solid grasp of a concept, the teacher strengthens each student's view of that concept by crafting questions and tasks which require each student to defend his/her own solutions or require the student to refute an answer that is presented to the class. As the teacher becomes aware of which students are excelling and which students require remediation, he or she communicates with the student and often the parent about creating a plan of action to fill the void.

Students who experience difficulty in mathematics traditionally meet with their teacher before, during, or after school. However, since many Western Tech students are unable to stay after school due to transportation issues or extra-curricular activities, a special lunch-time tutoring program was created. Tutoring/assistance is available daily to all students who have math questions; they may meet with a mathematics teacher to discuss and clear up any misconceptions during students' designated lunch periods. Students in every course from Algebra I to AP Calculus BC take advantage of this opportunity.

#### **4. Additional Curriculum Area:**

Western Tech is a magnet school serving the west side of Baltimore County. All eleven of the magnet programs are accredited and adhere to specific indicators and objectives. Technology implementation, career readiness, and hands-on experiences make each magnet special. The Health Science Technology and Environmental Science programs as well as the senior year internship opportunity illustrate the vast benefits magnet programs provide for students.

The Health Science Technology Program is a perfect example of a Career and Technology Education (CTE) program that prepares students for the diverse career opportunities available in the field of medicine. Students participate in classroom learning, internet-based activities, and laboratory simulations to prepare them for the delivery of direct patient care.

After completing required healthcare skill competencies, Health Science juniors are placed in hospital-based internships at the University of Maryland Medical Center, The R Adams Cowley Shock Trauma Center, and the Baltimore Veterans Affairs (VA) Medical Center. During this rotational internship experience, students participate in activities in multiple units and departments. They work with medical providers of varying levels of training and experience to take part in real-life healthcare situations and support the delivery of quality patient care. These experiences allow students to determine their future career path. As seniors, they have an opportunity to participate in a year-long structured internship in their specific career focus.

Health Science students meet with many healthcare professionals, take part in multiple health-improving initiatives, and participate in field trips at partnership institutions, including Towson University and The Community College of Baltimore County. They also participate in a variety of community outreach activities, including the support of fundraising activities with local non-profit organizations like the Living Legacy Donate Life 5K, the Kennedy Krieger Institute's Festival of Trees, and volunteer fire department open house demonstrations. Many Health Science graduates are now doctors, nurses, or pharmacists.

The Environmental Science magnet program has evolved over the years to meet changing student and world needs. Each of the sixty students admitted to the program is expected to graduate with at least eight science credits. Thus, course selections are planned for them in grades 9-11. In ninth grade, students take Biology and Ecology of Maryland and the Chesapeake Bay; as sophomores, students take Chemistry and Zoology; and juniors enroll in Physics and AP Environmental Science. For their senior year, students may choose from the following offerings: AP Physics, AP Chemistry, AP Biology, Anatomy and Physiology, and Microbiology.

Environmental Science students not only learn about science concepts, but they also experience how they can apply what they learn to the world around them. For example, students canoe on local waterways, learning about environmental issues that directly affect Maryland; participate in tree planting at the school and in the surrounding community; monitor the health of a local stream, suggesting potential improvements;

and design plans for communities to better use energy sources. In addition, Environmental Science students take pride in their program and their school. Students in this magnet program were the driving force behind Western Tech being designated a Maryland Green School. These dedicated students helped to implement environmental programs throughout the school and compiled a portfolio that demonstrated how the school impacts the environment in a positive way.

Environmental Science students have gone on to pursue various scientific fields of study, including Oceanography, Biology, and Environmental Science. Graduates are working with organic farming and for environmental consulting companies, as well as heading conservation lobbying organizations in Washington, D.C.

In addition to the classroom learning and hands-on experiences provided in all of the school's magnet programs, upon completion of their magnet programs in eleventh grade, all Western Tech students have the option to apply for a capstone work experience or a math/science internship for their senior year. Students meeting the rigorous requirements for these two programs are placed with a mentor in a paid or unpaid related site. The mentor, magnet teacher, and program coordinator develop a structured learning plan tailored to the student's specific instructional needs that stresses academics, technical skills, and employability. Periodic on-site evaluation conferences with the student, mentor, and coordinator assess achievement and develop strategies for improvement and/or extension of skills.

Capstone work experiences range from Culinary Arts students interning with executive chefs to Health Science students working at hospitals to Mechanical Construction students completing the first-year of apprenticeship with selected mechanical and engineering contractors. Math/science internships range from Environmental Science students interning at environmental and nature centers to Information Technology students interning at the National Security Agency. The goal of the internship program is to allow students to enhance their technical and workplace readiness skills while networking with professionals in their field of study. This year, one third (75 students) of the senior class is participating in the internship program at more than sixty related sites.

## **5. Instructional Methods:**

Western Tech lives the mission of preparing every student for college and/or career readiness. Strong emphasis is placed on meaningful skill development to assist students in reading, annotating text, discussion techniques, preparing projects, workplace readiness skills, experiential science programs, reflection, and essay writing. Through ongoing collaboration and tireless preparation by the teachers, differentiation and technology implementation are hallmarks of Western Tech lessons.

The English Department, through the analysis of student data, identifies students who may need additional supports. These students are offered the use of digital texts, audio supports, and close reading instruction. Additionally, the English, Science, and Math departments create individualized and group instruction based on need for students who have not met state and national testing with success. In this setting, support, skill development, and scaffolding is provided so students can meet with success on the HSA, PSAT, and/or the SAT. Finally, with regards to differentiation, the Social Studies Department created an innovative way to teach an "advanced honors" course for students who could not fit the two-credit AP U.S. History course into their schedules. The "advanced honors" course is taught in a college seminar style, requiring each student to participate. Extensive outside reading facilitates this discussion, and students enjoy the debate and participatory nature of the class. This new course is an example of the lengths to which the faculty will go to tailor courses and instruction to support the academic goals of students.

Technology is utilized across all disciplines and leveraged to create an extension of the classroom. Edmodo (an online networking application for teachers and students) has encouraged academic social networking and collaboration among students and faculty. Teachers throughout the building use Edmodo to continue classroom discussions, accept student assignments, create online assessments, and facilitate student-led online study groups. In addition, the internship coordinator uses Edmodo to communicate and collect workplace evaluations from seventy-five students placed in sixty different sites across the Baltimore metro

region, and AP Psychology students use Edmodo to collaborate with students at other Baltimore County high schools in a partnership Western Tech faculty helped develop. Edline connects students and parents to course content, review materials, and online assessments, and in many classes, students use their mobile devices to provide polling responses and for collaborative discussion, holding all students accountable and supporting students who are reluctant to participate in a traditional manner.

## **6. Professional Development:**

Professional development at Western Tech is a priority based on common sense and alignment to the school's mission of preparing students for post-secondary education and the workforce. As such, professional development activities are an integral part of school-wide faculty meetings.

For the past two years, a sizable portion of the monthly faculty meetings has been devoted to helping teachers develop new knowledge, skills, and practices related to the Common Core and PARCC assessments. Professional development activities are tied to the overarching plan for Baltimore County Public Schools and the Maryland State Department of Education. Most impressive is that the English/Language Arts; Math; and Science, Technology, Engineering, and Mathematics (STEM) related professional development activities have been teacher-led.

Many teachers attend professional development programs outside of the school house. All teachers of AP courses have received training through one-day workshops or the week-long summer institute held at Goucher College. These AP professional development opportunities are offered by Baltimore County Public Schools and sponsored by the College Board. Teachers from all disciplines have attended countywide content-specific workshops and conferences. Numerous teachers also have presented at the department, school, and county levels, and many are currently enrolled in graduate or doctoral programs.

In addition to teacher-led professional development, the Leadership Team, which is comprised of department chairs and administrators, plays an active role. Book studies have proven to be an effective tool to sharpen the minds and skills of department chairs. In the past three years, the Leadership Team has read and discussed the following books: *The Five Dysfunctions of a Team: A Leadership Fable* by Patrick Lencini; *Drive* by Daniel Pink, and *Focus: Evaluating the Essentials to Radically Improve Student Learning* by Mike Schmoker. All three books have contributed greatly to the development of teamwork and the need to have a clearly defined vision and mission.

The Leadership Team has played a critical role this year in providing quality professional development to the entire school with regards to the new teacher evaluation system. Said professional development has quelled anxiety and has allowed teachers to remain focused on teaching and learning.

## **7. School Leadership**

Western Tech's leadership philosophy is predicated on teamwork. The principal is a former military officer and believes an organization is maximized when individual stakeholders work together for the common good. The school is structured in such a way that "teams" of administrators, teachers, parents, and students contribute to the mission of the school. The principal solicits advice and input from the Administrative Team, the Leadership Team, content departments, the School Improvement Team, the Parent Teacher Student Association (PTSA), and the Student Government Association (SGA) in order to set the course and direction of the school.

The principal meets daily with the members of the Administrative Team and once a week in a formal setting. Members of the Administrative Team include the principal, two assistant principals, the athletic director, and the administrative assistant to the principal. The inclusion of the athletic director highlights the school's support of the student-athlete.

The Leadership Team is at the heart of the academic decision-making within the school. The team is comprised of the assistant principals, subject area department chairs, career major chairs, the special

education chair, the physical education/health department chair, and the athletic director. The team meets bi-monthly, and the analysis of student performance data is at the heart of each meeting. Decisions and/or areas of discussion of the Leadership Team are then communicated to the faculty during the monthly department meetings. Relevant issues generated in department meetings are often brought up for discussion during Leadership Team meetings.

In addition to being a member of his/her department, each faculty member is a member of the School Improvement Team. The School Improvement Team meets monthly in six different committees. These committees are directly related to the school's mission and goals. Staff members are assigned to a committee and serve on it for a full school year. This allows them to become an expert in that area of the school's focus. The committees for the 2013-14 school year are Advanced Placement, SAT, Ninth Grade Team, Communications, Student Recognition, and Student Relationships. Each committee has a leader who is responsible for setting the agenda and running the monthly meeting.

Finally, the Administrative Team meets monthly with the PTSA to discuss issues pertinent to parents and students, and the principal meets periodically with the advisor and members of the SGA to remain informed of the student perspective.

# PART VII - ASSESSMENT RESULTS

## STATE CRITERION--REFERENCED TESTS

**Subject:** Math

**Test:** Algebra/Data Analysis HSA

**All Students Tested/Grade:** 9

**Edition/Publication Year:** 2013

**Publisher:** Maryland State Department of Education

School Year	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009
Testing month	May	May	May	May	May
<b>SCHOOL SCORES*</b>					
% Proficient plus % Advanced	100	99	99	98	95
% Advanced	28	28	32	29	22
Number of students tested	218	200	206	184	218
Percent of total students tested	100	100	100	100	100
Number of students tested with alternative assessment	0	3	2	3	1
% of students tested with alternative assessment	0	2	1	2	1
<b>SUBGROUP SCORES</b>					
<b>1. Free and Reduced-Price Meals/Socio-Economic/Disadvantaged Students</b>					
% Proficient plus % Advanced	100	100	100	97	87
% Advanced	24	27	31	26	9
Number of students tested	59	59	51	46	44
<b>2. Students receiving Special Education</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>3. English Language Learner Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>4. Hispanic or Latino Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>5. African- American Students</b>					
% Proficient plus % Advanced	100	99	100		
% Advanced	22	25	27		
Number of students tested	157	145	152		
<b>6. Asian Students</b>					
% Proficient plus % Advanced	100				
% Advanced	54				
Number of students tested	28				
<b>7. American Indian or</b>					

<b>Alaska Native Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>8. Native Hawaiian or other Pacific Islander Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>9. White Students</b>					
% Proficient plus % Advanced	100	97	96		
% Advanced	42	44	46		
Number of students tested	26	36	27		
<b>10. Two or More Races identified Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>11. Other 1: Other 1</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>12. Other 2: Other 2</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>13. Other 3: Other 3</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					

**NOTES:** Due to Maryland State Department of Education (MSDE) required changes in race codes, racial and ethnicity trends begin in 2011.

**STATE CRITERION--REFERENCED TESTS**

**Subject:** Reading/ELA

**Test:** English HSA

**All Students Tested/Grade:** 10

**Edition/Publication Year:** 2013

**Publisher:** Maryland State Department of Education

School Year	2012-2013	2011-2012	2010-2011	2009-2010	2008-2009
Testing month	May	May	May	May	May
<b>SCHOOL SCORES*</b>					
% Proficient plus % Advanced	99	97	97	97	93
% Advanced	33	32	48	37	47
Number of students tested	222	210	219	192	227
Percent of total students tested	100	100	100	100	100
Number of students tested with alternative assessment	0	3	2	3	1
% of students tested with alternative assessment	0	1	1	2	1
<b>SUBGROUP SCORES</b>					
<b>1. Free and Reduced-Price Meals/Socio-Economic/Disadvantaged Students</b>					
% Proficient plus % Advanced	99	95	96	97	91
% Advanced	33	34	40	29	38
Number of students tested	60	62	53	48	45
<b>2. Students receiving Special Education</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>3. English Language Learner Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>4. Hispanic or Latino Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>5. African- American Students</b>					
% Proficient plus % Advanced	99	98	97		
% Advanced	30	28	44		
Number of students tested	159	149	161		
<b>6. Asian Students</b>					
% Proficient plus % Advanced	100				
% Advanced	62				
Number of students tested	29				
<b>7. American Indian or Alaska Native Students</b>					
% Proficient plus % Advanced					
% Advanced					

Number of students tested					
<b>8. Native Hawaiian or other Pacific Islander Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>9. White Students</b>					
% Proficient plus % Advanced	96	92	97		
% Advanced	30	50	62		
Number of students tested	27	38	30		
<b>10. Two or More Races identified Students</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>11. Other 1: Other 1</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>12. Other 2: Other 2</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					
<b>13. Other 3: Other 3</b>					
% Proficient plus % Advanced					
% Advanced					
Number of students tested					

**NOTES:** Due to Maryland State Department of Education (MSDE) required changes in race codes, racial and ethnicity trends in 2011.