

Academies of Loudoun Admissions

August 11, 2020



Changes to Admissions and Recruitment

- Staff recommends implementation of revised, proposed changes to the Academies of Loudoun admissions process.
- The changes include a merit-based approach to promoting the geographic and socioeconomic diversity of students admitted to the Academy of Science (AOS) and the Academy of Engineering and Technology (AET).
- Other changes in admissions and recruitment would seek to promote the racial and ethnic diversity of admitted students, specifically black and brown students.



Underrepresentation at AET & AOS

Students from Economically Disadvantaged Families, Fall 2020

Econ. Disadvantaged	LCPS	Applied	Admitted	Applied	Admitted
		Academy of Engineering & Technology (AET)		Academy of Science (AOS)	
No	80%	88% (1454)	98% (142)	86% (1461)	98% (119)
Yes	20%	12% (196)	2% (3)	14% (228)	2% (3)

- 19% of LCPS 8th grade students on September 30, 2019 were from economically-disadvantaged families.
- 19% of AOS and AET enrollment is 17 and 21 students, respectively. Only 3 students from economically-disadvantaged families were admitted to each Academy.



Geographic Underrepresentation at AOS, Fall 2020

Enrolled < 75% anticipated

School*	Actual Portion of Enrolled AOS Students		Anticipated Student Enrollment in AOS (Based on school's 8th grade enrollment as a proportion of division enrollment)	
	Number	Percentage of Total Enrollment	Number	Percentage of Total Enrollment
Belmont Ridge	6	4.92%	7	6.03%
Blue Ridge	1	.082%	5	4.33%
Brambleton	15	12.30%	8	6.85%
Eagle Ridge	13	10.66%	8	6.25%
Farmwell Station	10	8.20%	7	5.97%
Harmony	2	1.64%	7	5.58%
Harper Park	3	2.46%	7	5.84%
J. Lupton Simpson	-	0.00%	7	5.93%



Note: Numbers may not add up to 100 due to rounding

*Mercer MS not included as they did not have an 8th grade class

**actual enrollment data as of May 2020

Geographic Underrepresentation at AOS, Fall 2020

Enrolled < 75% anticipated

School*	Actual Portion of Enrolled AOS Students		Anticipated Student Enrollment in AOS (Based on school's 8th grade enrollment as a proportion of division enrollment)	
	Number	Percentage	Number	Percentage
J. Michael Lunsford	13	10.66%	10	8.45%
River Bend	1	.082%	7	6.11%
Seneca Ridge	1	0.82%	6	4.78%
Smart's Mill	1	0.82%	7	5.44%
Sterling	-	0.00%	7	5.43%
Stone Hill	15	12.30%	6	5.19%
Trailside	10	8.20%	8	6.49%
Willard	31	25.41%	14	11.27%



Note: Numbers may not add up to 100 due to rounding
 *Mercer MS not included as they did not have an 8th grade class
 **actual enrollment data as of May 2020

Schools with Disproportionate Underenrollment Academy of Science, Fall 2020

Eight middle schools each had no students, 1 student, 2 students, or 3 students who enrolled. Their actual AOS enrollment was less than 75% of anticipated enrollment, based on the size of their 8th grade class.

- These 8 middle schools had a total of 9 students who enrolled.
- If these 8 middle schools had the anticipated enrollment in AOS based on the size of their 8th grade class, then they would have had a total of 42.8% (52) students who enrolled.



Geographic Underrepresentation at AET, Fall 2020

Enrolled < 75% anticipated

School*	Actual Portion of Enrolled AET Students		Anticipated Student Enrollment in AET (Based on school's 8th grade enrollment as a proportion of division enrollment)	
	Number	Percentage of Total Enrollment	Number	Percentage of Total Enrollment
Blue Ridge	6	4.17%	6	4.33%
Brambleton	11	7.64%	10	6.85%
Eagle Ridge	18	12.50%	9	6.25%
Farmwell Station	8	5.56%	9	5.97%
Harmony	3	2.08%	8	5.58%
Harper Park	9	6.25%	8	5.84%
J. Lupton Simpson	6	4.17%	9	5.93%



Note: Numbers may not add up to 100 due to rounding
 *Mercer MS not included as they did not have an 8th grade class
 **actual enrollment data as of May 2020

Geographic Underrepresentation at AET, Fall 2020

Enrolled < 75% anticipated

School*	Actual Portion of Enrolled AET Students		Anticipated Student Enrollment in AET (Based on school's 8th grade enrollment as a proportion of division enrollment)	
	Number	Percentage of Total Enrollment	Number	Percentage of Total Enrollment
River Bend	6	4.17%	9	6.11%
Seneca Ridge	4	2.78%	7	4.78%
Smart's Mill	6	4.17%	8	5.44%
Sterling	3	2.08%	8	5.43%
Stone Hill	22	15.28%	8	5.19%
Trailside	7	4.86%	9	6.49%
Willard	14	9.72%	16	11.27%



Note: Numbers may not add up to 100 due to rounding
 *Mercer MS not included as they did not have an 8th grade class
 **actual enrollment data as of May 2020

Schools with Disproportionate Underenrollment AET, Fall 2020

Five middle schools each had between three and five students who enrolled. Their actual AET enrollment was less than 75% of anticipated enrollment, based on the size of their 8th grade class.

- These five middle schools had a total of 22 students (15%) who enrolled.
- If these five middle schools had the anticipated enrollment in AET based on the size of their 8th grade class, then they would have had a total of 39 students (27%) who enrolled.



Racial/Ethnic Underrepresentation at AET, Fall 2020

Race/ Ethnicity	Percentage of LCPS Enrollment	Portion of Applicant Pool		Portion of Admitted Students**	
		Number	Percentage	Number	Percentage
American Indian	2%	*	1%	0	0%
Asian	23%	852	52%	82	55%
Black/ African- American	7%	99	6%	*	5%
Hispanic	18%	193	12%	*	3%
Two or More	1%	65	4%	*	3%
White	46%	434	26%	51	34%



Note: Numbers may not add up to 100 due to rounding
 * = N is too small (fewer than 10 students)
 **actual enrollment data as of May 2020

Racial/Ethnic Underrepresentation at AOS, Fall 2020

Race/ Ethnicity	Percentage of LCPS Enrollment	Portion of Applicant Pool		Portion of Admitted Students**	
		Number	Percentage	Number	Percentage
American Indian	2%	11	1%	0	0%
Asian	23%	839	50%	103	82%
Black/ African- American	7%	156	9%	*	2%
Hispanic	18%	270	16%	0	0%
Two or More	1%	51	3%	*	1%
White	46%	361	21%	19	15%



Note: Numbers may not add up to 100 due to rounding
 * = N is too small (fewer than 10 students)
 **actual enrollment data as of May 2020

Merit-Based Approaches to Promoting Diversity among Admitted Students

- If the group of students enrolled at AET and AOS for the fall of 2020 included at least **75% of** the number of students that would have been **expected** to be enrolled from each **middle school** (based on the size of the school's 8th grade class), then 37 more students from underrepresented middle schools would have been enrolled.
- If the group of students enrolled at AET and AOS for the fall of 2020 included at least **75% of** the number of students that would have been **expected** to be enrolled from **economically-disadvantaged** families (based on percentage of students eligible for free- and reduced-price meals), then 32 more students from economically-disadvantaged families would have been enrolled.
- The 37 **unadmitted students** from the underrepresented middle schools with the highest test scores and the 32 unadmitted students from economically disadvantaged families with the highest test scores **earned STEM Thinking Test scores that are similar to admitted students.**



Test Scores of Non-Admitted Students from Economically-Disadvantaged Families

STEM Thinking Skills Test Scores of the Highest-Scoring Students from Economically-Disadvantaged Families who were NOT Admitted Relative to Scores of Students Who Accepted Admission Offers for Fall 2020

	Accepted Admission first quartile (1st percentile to 24th percentile)	Accepted Admission second quartile (25th percentile to 49th percentile)	Accepted Admission third quartile (50th percentile to 74th percentile)	Accepted Admission top quartile (75 percentile or higher)
AOS	0	10	3	1
AET	10	6	1	1



Test Scores of Students Not Admitted to AOS from Underrepresented Middle Schools

STEM Thinking Test Scores of the Highest-Scoring Students from Underrepresented Middle Schools who were NOT Admitted to AOS Relative to Scores of Students Who Accepted Admission Offers for Fall 2020

Accepted Admission first quartile (1st percentile to 24th percentile)	Accepted Admission second quartile (25th percentile to 49th percentile),	Accepted Admission third quartile (50th percentile to 74th percentile)	Accepted Admission top quartile (75 percentile or higher)
0	1	21	8



Test Scores of Students Not Admitted to AET from Underrepresented Middle Schools

STEM Thinking Test Scores of the Highest-Scoring Students from Underrepresented Middle Schools who were NOT Admitted to AET Relative to Scores of Students Who Accepted Admission Offers for Fall 2020

first quartile (1st percentile to 24th percentile)	second quartile (25th percentile to 49th percentile),	third quartile (50th percentile to 74th percentile)	top quartile (75 percentile or higher)
0	0	2	5



Lack of Racial/Ethnic Diversity

- If LCPS implements the recommended merit-based approach to providing greater socio-economic and geographic diversity, the measures may or may not improve the racial/ethnic diversity of enrolled students
- Socio-economic and geographic diversity have educational value in and of themselves
- Socio-economic and geographic diversity are NOT being used as a proxy for race/ethnicity
- In selecting individual students for a magnet school, such as AET or AOS, the Supreme Court has held that a district that is not remedying a finding of past discrimination must consider whether there are workable race-neutral alternatives, such as socio-economic and geographic diversity, that may achieve racial diversity in the program.



Proposed Changes to Selection Process



Proposed Changes to Admissions

Math Requirement

Currently, Algebra I is a prerequisite for applying to the Academy of Science (AOS), and Geometry is a prerequisite for applying to the Academy of Engineering and Technology (AET). Beginning with the fall admissions of 2020, Algebra I, rather than Geometry, would be a prerequisite for applying to the AET program, matching the math prerequisite for the AOS.



Proposed Changes to Admissions

Assessments

The number of assessments applicants must complete for the admissions process for AOS and AET would be reduced from four assessments (CCTDI, STEM Thinking Skills Assessment, CCTST-N, and Writing Assessment) to two assessments (STEM Thinking Skills Assessment and Writing Task).

This change also would reduce the number of testing days from two to one.



Proposed Changes to Admissions

Phased Admissions Process

The current two-phased process for AOS and AET would be streamlined for applicants so that there would be only **one phase**, and a panel of educators with diverse backgrounds and experiences would review the profiles of each applicant by considering the scores achieved by students on the Writing Assessment and the STEM Thinking Skills Assessment to determine students to be offered admission.



Proposed Changes to Admissions

To be eligible to be considered for the AOS or AET program, eighth grade students must be enrolled in or completed **Algebra I** at the time of application and have earned a **C average or better in grades 6 and 7** for all of their classes. Grades from first semester of grade 8 would not be considered during the Fall 2020 admission window.

All applicants who complete a timely application and who meet the Algebra I and grade average requirements would take the **STEM Thinking Skills Assessment** and **Writing Assessment**. Applicants would complete the assessments on one day instead of in two phases. All applicants would complete the STEM Thinking Skills Assessment and Writing Assessment, whereas the previous process only allowed finalists to complete the Writing Assessment.



Proposed Changes to Admissions: Writing Assessment

The purpose of the Writing Assessment would be revised. The purpose of the revised Writing Assessment would be to assess each application's **motivation, perseverance and creativity**. A sample writing prompt might be to ask students how challenges in their lives could be turned into opportunities.

Two reviewers would score each student's response using a rubric developed to assess motivation, persistence, problem-solving and creativity. A third reviewer would score any student's response if the scoring done by the two reviewers differed by more than a point. The division would train reviewers in the application of the rubric to the written responses.

Annually, the Research Office would review the results of the scoring to ensure reliability of scoring across reviewers and to **ensure equitable results** across students with diverse backgrounds.



Proposed Changes to Admissions: Panel Review

- The Research Office would use the scores from the STEM Thinking Skills Assessment and the Writing Task to develop a profile for each applicant. The profiles created by the Research Office would be provided to the panel in rank order for each middle school and for students from economically-disadvantaged families according to STEM Thinking Skills Assessment scores, with accompanying Writing Assessment scores.
- The profiles would be reviewed by a diverse panel of educators to identify students who will be offered admission to the AET and AOS programs. The panel would be racially and ethnically diverse.
- The selection process would take into consideration the principle of geography/ socio-economic equity. The panel would use its professional expertise in determining those students in each school whose profile suggests the greatest likelihood of success, while also taking into consideration the principle of geography/socio-economic equity. The list would include names that represent at least 75% of expected representation by middle school and for students from economically-disadvantaged families.
- Teacher recommendations would not be used in the 2020-2021 admissions process because of the impact of the COVID-19 global pandemic.



Recruitment and Outreach: Office of Admissions Mission and Goals

The LCPS and the LCPS' Office of Admissions at the Academies of Loudoun seeks to recruit and select students with an interest in STEM from diverse backgrounds, including race/ethnicity, gender, disability, English Learner and socioeconomic status, and students from all geographic areas of Loudoun County who demonstrate a desire to be challenged by advanced academic coursework and collaborative research.

- **Commitment to Equity and Diversity** - to uphold the LCPS Equity Statement in all aspects of admissions.
- **Equitable Access** - to ensure equitable access to the admissions process for all students, including students of all races and ethnicities, students by gender, English Learner students, students by socioeconomic status, students with disabilities and students from all geographic areas and schools of Loudoun County.
- **Outreach and recruitment** - to continue to review and revise the outreach and recruitment plan to ensure that the plan includes strategies that provide for equitable access for all students in LCPS and for students with diverse backgrounds, including race/ethnicity, gender, disability, English Learner and socioeconomic status, and students from all geographic areas of Loudoun County.
- **Communication** - to ensure frequent communication with all LCPS schools and stakeholders. All materials on the LCPS and Academies website, presentations and materials related to the application process, outreach/recruitment materials, and admissions presentations will be translated into the major languages spoken by students and parents in Loudoun County.



Recruitment and Outreach

The purpose of recruitment and outreach endeavors is to increase awareness and interest in the Academies of Loudoun with a special emphasis on increasing applicant and enrollment diversity while operating under a unique and challenging COVID-19 Response Effort.

- Provide opportunities for students to engage in high quality experiences which develop an interest in STEM
- Educate families about the Academies of Loudoun and the application process
- Provide support for potential applicants



Recruitment and Outreach: Field Trips

- All Level Up middle school students will be offered a virtual field trip to the Academies of Loudoun for an interactive learning experience and tour
- All high schools will have a day to virtually tour the Academies of Loudoun and learn about the winter admissions process (MATA and Advanced AET)
- Virtual field trips will be offered to elementary and middle school students with the opportunity to engage in STEM activities



Recruitment and Outreach: Outreach

- Participate in local STEM events (as allowed per state and local guidelines)
- Virtual Information Sessions throughout the admissions cycle
 - Virtual translation services are being planned
 - Virtual meetings will be published on Academies of Loudoun webpage
- School visits
 - Meet with all 8th grade students enrolled in Algebra I or higher to learn about the admissions cycle for AET and AOS
 - Meet with all 7th grade classes in Spring 2021 to provide information
 - Sessions will be done virtually until it is safe to be in person



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