




Access & Equity Review

South Orange and Maplewood School District
Board of Education Meeting

Dr. Ronald G. Taylor
February 22, 2021

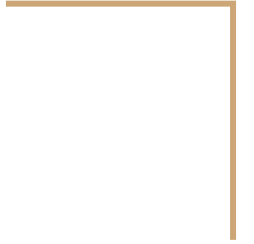
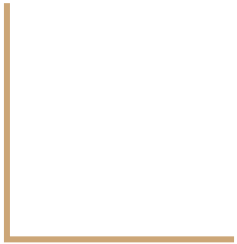


Purpose

To take a deeper dive reviewing our Access and Equity journey as a District.
Specifically-

- Levers
 - 6th grade math choice.
 - 8th Grade Algebra 1
 - Children of Color course selection (Middle School)
 - Intervention and Supports enrollment.
 - Teacher recommendation/Prerequisite Assessments
 - Math Journey to Calculus
 - Historical view of 'Adds/Drops'
 - AP Summer Assignments

6th Grade Mathematics



6th Grade Math Choice

Grade 6 Math	<i>This course addresses grade 6 New Jersey Student Learning Standards for math. It covers one grade level of math concepts in one year. This course prepares students for Pre-algebra as 7th graders.</i>	Sixth-grade mathematical content is focused on big ideas, such as equivalence, number sense, properties, operational reasoning, variables, and statistical thinking. Content primarily focuses on four critical areas: (1) connecting ratio and rate to whole number multiplication and division and using concepts of ratio and rate to solve problems; (2) completing understanding of division of fractions and extending the notion of number to the system of rational numbers, which includes negative numbers; (3) writing, interpreting, and using expressions and equations; and (4) developing an understanding of statistical thinking. The mathematical processes (problem-solving, communication, reasoning, connections and representation) continue to be essential in the learning of mathematics.
Grade 6 Honors (level eliminated for the 18-19 school year)	<i>This course addressed grade 6 New Jersey Student Learning Standards for math. It covered one grade level of math concepts in one year. This course prepared students for Grade 7 Honors, now called Grade 7 Pre-algebra.</i>	This course addressed all content included in Grade 6 Math (above) but emphasized non-routine, complex, and unfamiliar applications. It limited time spent on Grade 6 arithmetic and extended concepts with rational numbers, ratios and proportions, and expressions and equations into Grade 7 learning standards.
Pre-Algebra 6	<i>In addition to the above grade 6 concepts, this course includes all of the grade 7 New Jersey Student Learning Standards for math. It integrates two full grade levels of concepts in one year. This course prepares students for Algebra I (integrated with Grade 8) as 7th graders.</i>	This Pre-algebra curriculum combines foundational concepts from grade 6 and expands to include Pre-algebra 7 content. The pacing and reasoning are more rigorous than students' other classes as it prepares them for Algebra I, a grade 9 course, the following year. Exploration is focused on proportional reasoning, including problems with ratio, rate, and percent and expanding reasoning to the entire rational number system. Algebraic activities also involve solving expressions, inequalities, and linear equations. Concepts and skills are initially presented through models, and real and familiar situations, followed by problems involving algebraic representation. Students will also reason with data and geometric measurements and formulas.

Grade 6 Math Enrollment Data (Districtwide)

<u>Course</u>	<u>Ethnicity</u>	<u>2017-2018</u>	<u>2018-2019</u>	<u>Yr over Yr %</u>	<u>2019-2020</u>
Grade 6 Math	White	45	146 (+101)	+224%	127
	Black	82	95 (+13)	+15.85%	90
	Other	32	41(+9)	+28.12%	52
Grade 6 Honors (eliminated 2018)	White	133	N/A	N/A	N/A
	Black	56	N/A	N/A	N/A
	Other	48	N/A	N/A	N/A
Gr. 6 Pre-algebra	White	85	170 (+85)	+100%	169
	Black	19	29 (+10)	+52%	34
	Other	25	51 (+26)	+104%	42

Grade 6 Math Enrollment Data (Districtwide)

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Grade 6 Math	White	45	146 (+101)	+224%	127	-13% (-19)
	Black	82	95 (+13)	+15.85%	90	-5.2% (-5)
	Other	32	41(+9)	+28.12%	52	+26% (+11)
Grade 6 Honors (eliminated 2018)	White	133	N/A	N/A	N/A	N/A
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	Other	48	N/A	N/A	N/A	N/A
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6th Grade Summation...

The number and percentage of Children of Color taking the highest level 6th grade math class (since the elimination of the honors option) has increased in consecutive years. Specifically, since the 2017-2018 school year students whose families identified as Black have increased enrollment in the highest level 6th grade math class by 15 (2 yr total) a 45% increase. Families who identify as 'Other' have also seen an increase, by 17 (2 yr total) a 41% increase.

White students' enrollment in the same course has increased by 84 (2 year total) 99% increase.

6th Grade Summation...

The number and percentage of Children of Color taking the customary 6th grade math class (since the elimination of the honors option) has increased. Specifically, since the 2017-2018 school year children in families who identified as Black have increased their enrollment **by 8, a 9% increase**. Families who identify as 'Other' have also seen an increase, **17 (2 yr consecutive years increase) a 39% increase**.

White students' enrollment in the same course has increased **by 82, a 182% increase**.



Where did the Honors Students Go???



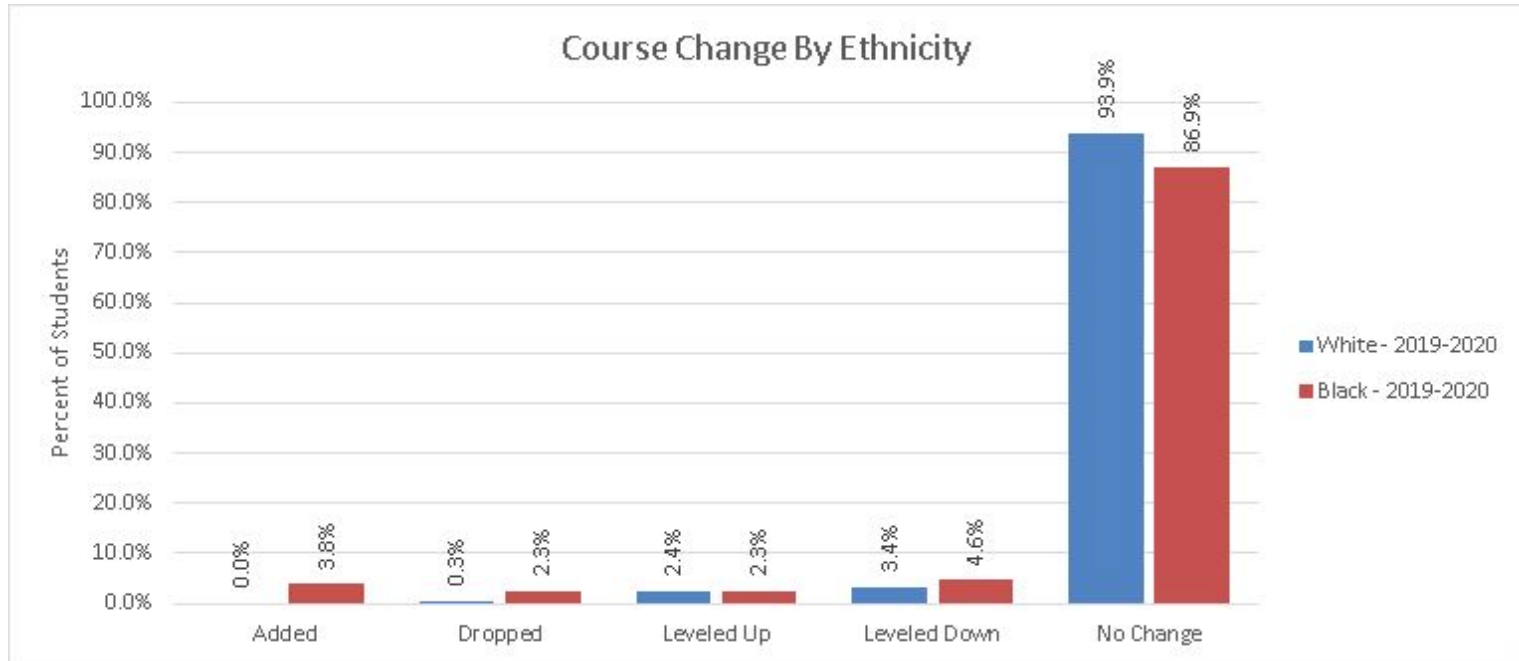
6th Grade Summation...

Enrollment Trends ...

Year	Total 6th Grade Math Students	Total Black Students 6th Grade math	Total Students whose family identify as 'Other'	% enrolled in Grade 6th math	% enrolled in 6th Grade Honors Math	% enrolled in 6th Grade Pre-Algebra
2017-2018	525	157 (30%)	105(20%)	30.2%	45%	24%
2018-2019	532	124 (23%)	92 (17.2%)	53%	N/A	47%
2019-2020	514	124 (24%)	94 (18.2%)	52%	N/A	47%

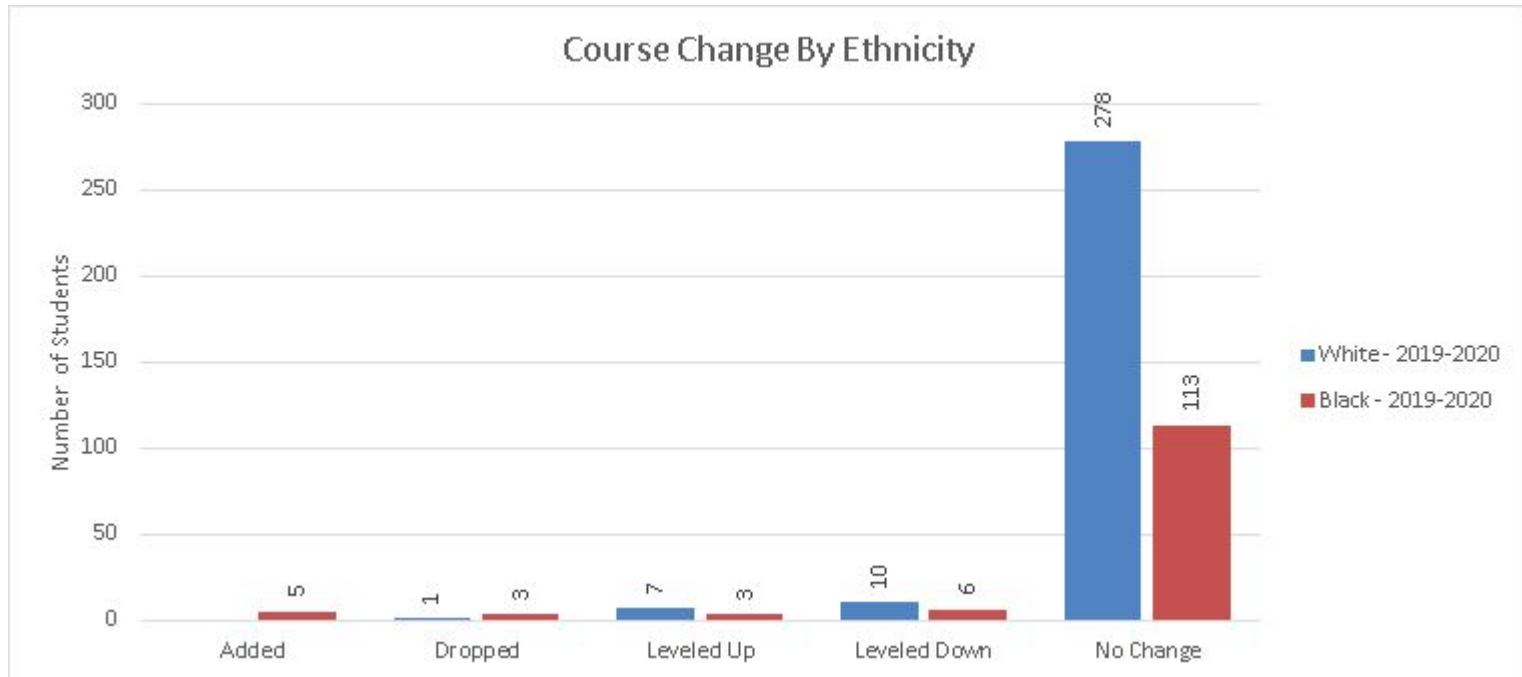
Adds/Drops Percentages and Connection to A&E

Grade 6 - Math % (2019-2020)

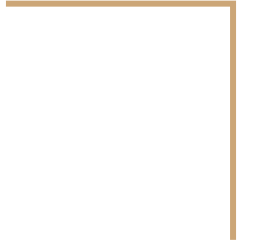


Adds/Drops Percentages and Connection to A&E

Grade 6 - Math #s (2019-2020)



8th Grade Mathematics



Course	Ethnicity	2017-2018	2018-2019	Yr over Yr%	2019-2020
8 Pre-algebra	White	19	50 (+31)	+163%	33
	Black	62	100 (+38)	+61%	64
	Other	16	23 (+7)	+43%	19
8 Pre-algebra HN	White	83	N/A	N/A	N/A
(eliminated 2018)	Black	46	N/A	N/A	N/A
	Other	23	N/A	N/A	N/A
8 Algebra I	White	74	136 (+62)	+84%	121
	Black	15	57 (+42)	+280%	64
	Other	15	44 (+29)	+193%	41
8 Geometry	White	82	89 (+7)	+8.5%	94
	Black	13	11 (-2)	-15%	25
	Other	30	26 (-4)	-13%	33

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	Other	15	44 (+29)	+193%	41	-6% (-3)
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	Black	13	11 (-2)	-15%	25	127% (+14)
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8th Grade Summation...

The number and percentage of Children of Color taking the highest level 8th grade math classes (since the elimination of the honors option) has increased in consecutive years. Specifically, since the 2017-2018 school year families who identified as Black have increased by **49 (2 yr total Alg 1)** & 12 (2 yr total Geometry).

This is significant...from **28 total for both classes** in 2017-2018 to **89 (combined)** in 2019-2020

Families who identify as Other have seen an increase as well...**from 45 total to 74 (combined).**

White students' enrollment in the same courses **has increased by 59 students combined when comparing 2017-2018 to 2019-2020.**

Middle School Math Continued...

School Breakout:

- Algebra I course selection data shows similar distributions for both middle schools.

MMS	2019-2020	2020-2021
W	63.24%	69.44%
B	19.12%	16.11%
O	17.65%	14.44%
SOMS	2019-2020	2020-2021
W	59.59%	69.70%
B	16.58%	15.15%
O	23.83%	15.15%

Data Summary:

- The percent of white students who selected Algebra I in middle school is greater than the district enrollment (percentage) of white students.
- The percent of Black students who selected Algebra I in middle school is less than the district enrollment (percentage) of Black students.
- The number of students dropping or adding Algebra I were few and did not demonstrate a trend by year or ethnicity.

District	2019-2020	2020-2021
W	61.46%	69.57%
B	17.88%	15.65%
O	20.65%	14.78%



Where did the Honors Students Go???



8th Grade Summation...

Enrollment Trends ...

Year	Total 8th Grade Math Students	Total Black Students 8th Grade math	Total Students whose family identify as 'Other'	% enrolled in 8th Grade Pre Alg	% enrolled in 8th Grade Pre-Alg Honors	% enrolled in 8th Grade Algebra	% enrolled in 8th Grade Geometry
2017-2018	478	136 (28%)	84 (17%)	20%	32%	22%	26%
2018-2019	536	168 (31%)	93 (17%)	32%	N/A	44%	23.5%
2019-2020	494	153 (31%)	93 (18.8%)	23%	N/A	46%	31%

Similar to our Advanced 6th Grade Mathematics our 8th Grade Geometry program has embedded Challenges.

Specifically-

- Age appropriate/Developmentally appropriate instructional levels.
- These are meant to be courses designed for students who are exceedingly capable of accelerating basic arithmetic instruction that is the scaffolding for their mathematics journey.
- The percentages/numbers of students enrolled in 'advanced' course beg for a later pedagogical discussion.



Raw (Refined) Data
Middle School Mathematics



MMS						Within Demographic Course Distribution		
		Black	White	Other		Black	White	Other
6th Grade								
Math - 6th Grade	115	54	49	12		64%	38%	32%
Pre-algebra - 6th Grade	137	30	81	26		36%	62%	68%
	252	84	130	38				
Population Distribution		33%	52%	15%				

SOMS						Within Demographic Course Distribution		
		Black	White	Other		Black	White	Other
6th Grade								
Math - 6th Grade	128	46	57	25		75%	38%	45%
Pre-algebra - 6th Grade	139	15	93	31		25%	62%	55%
	267	61	150	56				
Population Distribution		23%	56%	21%				

Combined Middle Schools								
		Black	White	Other		Black	White	Other
Math - 6th Grade	243	100	106	37		69%	38%	39%
Pre-algebra - 6th Grade	276	45	174	57		31%	62%	61%
	519	145	280	94				
Population Distribution		28%	54%	18%				

MMS						Within Demographic Course Distribution		
		Black	White	Other		Black	White	Other
7th Grade								
Math - 7th Grade	197	67	66	64		79%	48%	79%
Algebra 1 - 7th Grade***	107	18	72	17		21%	52%	21%
(Had To Estimate Algebra 1)		85	138	81				
Population Distribution		28%	45%	27%				

SOMS						Within Demographic Course Distribution		
		Black	White	Other		Black	White	Other
7th Grade								
Math - 7th Grade	159	50	82	27		77%	55%	63%
Algebra 1 - 7th Grade***	99	15	68	16		23%	45%	37%
(Had To Estimate Algebra 1)		65	150	43				
Population Distribution		25%	58%	17%				

Combined Middle Schools								
7th Grade		Black	White	Other		Black	White	Other
Math - 7th Grade	356	117	148	91		78%	51%	74%
Algebra 1 - 7th Grade***	206	33	140	33		22%	49%	27%
(Had To Estimate Algebra 1)		150	288	124				
Population Distribution		27%	51%	22%				

MMS						Within Demographic Course Distribution		
8th Grade		Black	White	Other		Black	White	Other
Math - 8th Grade	102	53	34	15		75%	21%	37%
Algebra 1 - 8th Grade***	80	13	54	13		18%	34%	32%
Geometry	91	5	73	13		7%	45%	32%
		71	161	41				
Population Distribution		26%	59%	15%				

SOMS						Within Demographic Course Distribution		
		Black	White	Other		Black	White	Other
8th Grade								
Math - 8th Grade	56	32	16	8		57%	12%	16%
Algebra 1 - 8th Grade***	94	15	64	15		27%	47%	30%
Geometry	92	9	56	27		16%	41%	54%
		56	136	50				
Population Distribution		23%	56%	21%				

Combine Middle Schools								
8th Grade		Black	White	Other		Black	White	Other
Math - 8th Grade	16	12	4	0		9%	1%	0%
Pre-algebra - 8th Grade	142	73	46	23		57%	15%	25%
Algebra 1 - 8th Grade***	174	28	118	28		22%	40%	31%
Geometry	183	14	129	40		11%	43%	44%
		127	297	91				
Population Distribution		25%	58%	18%				

Date	Math Course Selection Schedule 2021 for 21-22
Feb. 18 Webex 7pm	Grade 8 STEM Info Parent Night at CHS Overview of course offerings and paths (Jameel)
By Feb. 26	Set up eCollect for Gr. 5-7 (Manjit)
Feb. 16	Middle School Math Department Meeting Preparing for Course Selection
February 24	Grade 5 Math Teacher Meeting Preparing for Course Selection
March 8	Parent Letters posted to PowerSchool. Eblast Alert. Available courses and descriptions
March 16 7:00-8:30PM Webex	Parent Information Night <ul style="list-style-type: none"> · Math Course Offerings/Paths · Considerations when making a decision
March 26	Closing Date for Math Course Selection in eCollect
May	Announce Summer Math Boosters, Summer Packets, and optional online resource
June/July 3 weeks	Summer Math Boosters 8:30-12:30 weekdays



Interventions & Supports/ Accessibility



Planned Interventions/Supports

One important part of Access and Equity, deleveling was to be that Black students would be given **academic interventions and supports**, some directly intended to ensure opportunities for success in our most rigorous courses. Some of these opportunities include-

- Summer Programming (summer intervention 1 month. For kids who failed/Ds multiple marking periods)
- Additional Math Teachers (1 per Secondary School) with hopes of intervention
- Full Math Courses in the Summer (CHS) to skip ahead for 8th thru 11th graders Alg 1/Geo/Alg 2 (Former B minus prerequisite)
- Targeted professional development for Math teachers

Teacher Recommendations and Prerequisites

Through our Access and Equity journey, the District has made many efforts to remove glass ceilings (enrollment impediments) from Black children enrolling in high level courses. Specifically-

- Teacher recommendations were removed as a requirement/not an option.
- Specific scores on assessments were removed as a requirement/option. (not just removed as a requirement but also results not shared/re-shared).

Teacher Recommendations and Prerequisites Cont...

Through our Access and Equity journey, the District has made many efforts to remove glass ceilings (enrollment impediments) from Black children enrolling in high level courses. Specifically-

- Prior to A&E, math teachers considered course grade, previous course grade, and judgment when making recommendations. Ultimately course grades were the most weighted.
- Unfortunately, we have no formal documentation on the guidelines used prior to A&E but institutional knowledge has suggested the following-
 - If a student had a grade of 90 or better: it was recommend that they **move-up**. If they were between a grade of 77-90 they were recommended to **stay**. If they fell below a 77 it was suggested that they **move down**.
 - Students that were **recommended up** had a summer course to prepare them for moving up. During this time, the levels did not teach/test the same material. This recommendation process stopped after A&E was implemented.

Teacher Recommendations and Prerequisites Cont...

Continued...


- Students that were recommended 'up' had a summer course to prepare them for moving up since the levels did not teach/test the same material. This was critical in the crafting of the Access and Equity Policy, particularly:
 - *The district shall engage in a Kindergarten through 12th grade curricular alignment, ensuring that all students develop the knowledge and skills fundamental to successful performance in Advanced Placement and advanced level courses providing the highest academic rigor in all Kindergarten, Elementary, Middle and High School courses.*
 - This is a critical piece to understand and acknowledge. Children were placed in courses that didn't teach the core standards and hence were not prepared for the next sequenced course. This was the driving force behind the collapsing of levels in 2018 because teachers couldn't explain the difference between grade level geometry, honors geometry and advanced honors geometry. The idea was to ensure that the grade level geometry actually taught the standards of geometry and then the honors geometry was where the standards would be taught but at a faster rate and with more depth.

Teacher Recommendations and Prerequisites Cont...


As a result ...

- At CHS, students requesting the honors level of a course in math greatly outnumber those requesting the academic level. (Ex: Course request tallies below show some years where **the honors level makes up as much 80% of the students in the course.** At its lowest, the percentage of honors students in a course was 54%)

Course	18-19	19-20	20-21
Geom AC	150	228	169
Geom HN	238	279	196
Alg 2 AC	117	132	183
Alg 2 HN	424	336	411
Precalc AC	63	80	109
Precalc HN	306	325	286



CHS Course Highlights/ Processes



8th Grade Course Selection Process for CHS

- 8th Grade Scheduling Night - Weds. Feb 10
- Program of Studies and Course Request worksheet distributed
- Course selection open in PowerSchool until Mar 26
- High school counselors will meet with 8th graders during the school day in March to discuss course selection and assist with submission of requests

8th Grade Course Selection Process for CHS

(Tasks and questions)

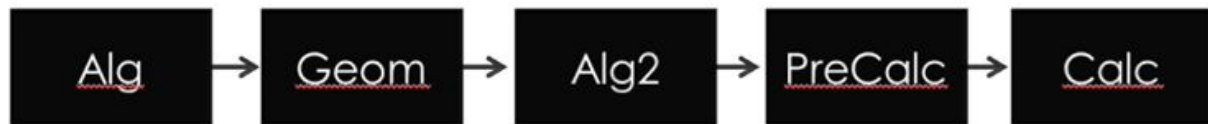
- Engage 8th grade counselors in a clear process for outreach to families who have not selected a course.
- How are they encouraging leveling up?
- How are we capturing parent engagement?
- How are we supporting translation for ELL families.

The *Perceived Gauntlet* to Calculus

We understand that many families are concerned that their children need to accelerate so that they are able to take Calculus and high level STEM courses by their 12th grade year.

During our Math Nights our Secondary STEM Supervisor emphasizes that ...all students can reach Calculus no matter when they first take Algebra 1 (See flow chart on next slide that is shared at presentations).

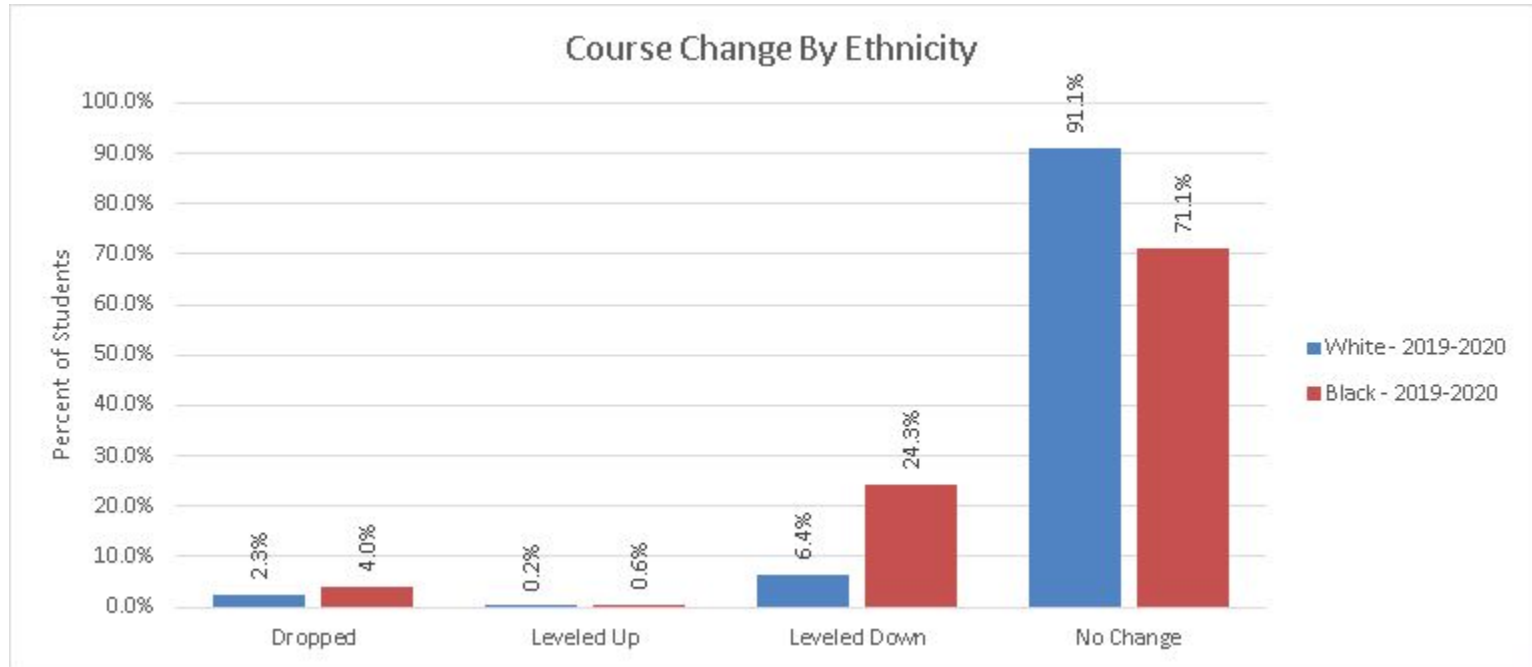
Routes to Calculus



Grade	8	9	10	11	12
Grade	7	8	9	10	11
Grade	9	Summer	10	11	12
		10	10	11	12
		10	Summer	11	12

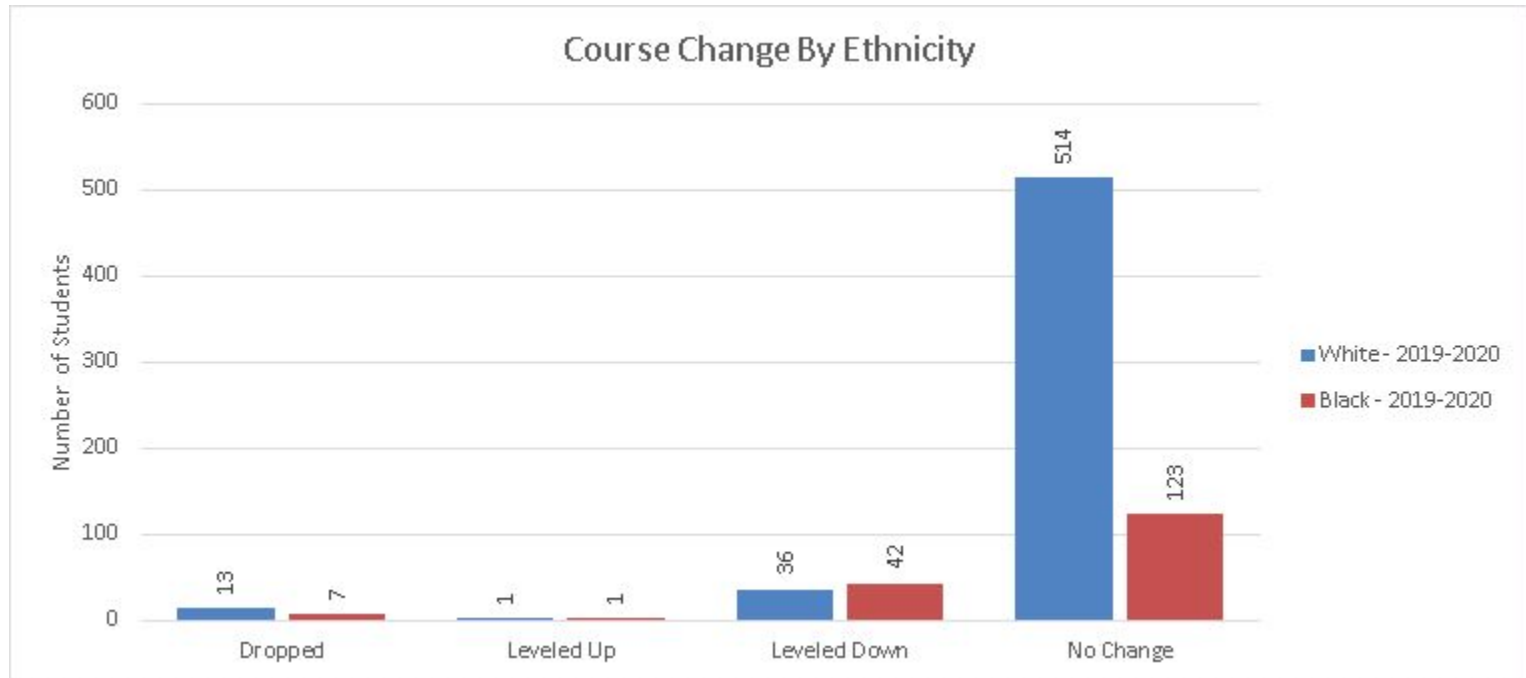
Adds/Drops Percentages and Connection to A&E

CHS Honor



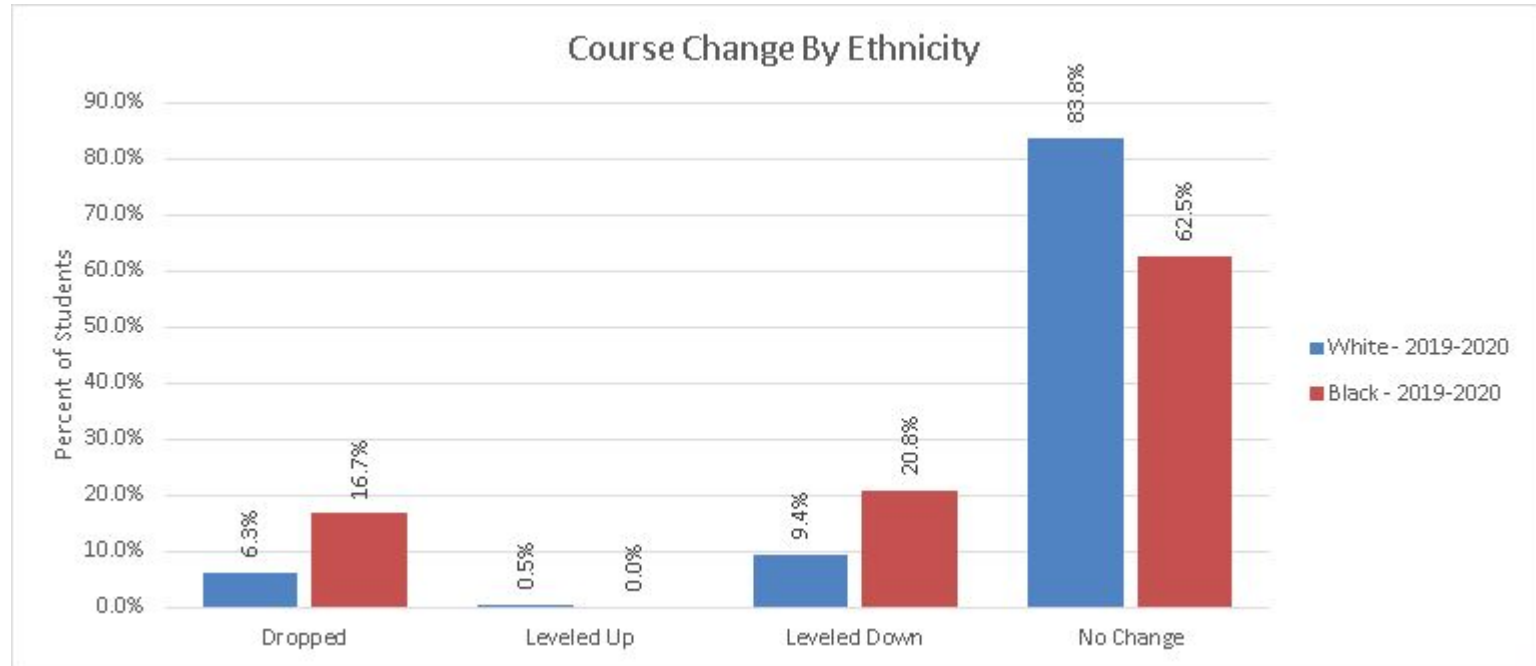
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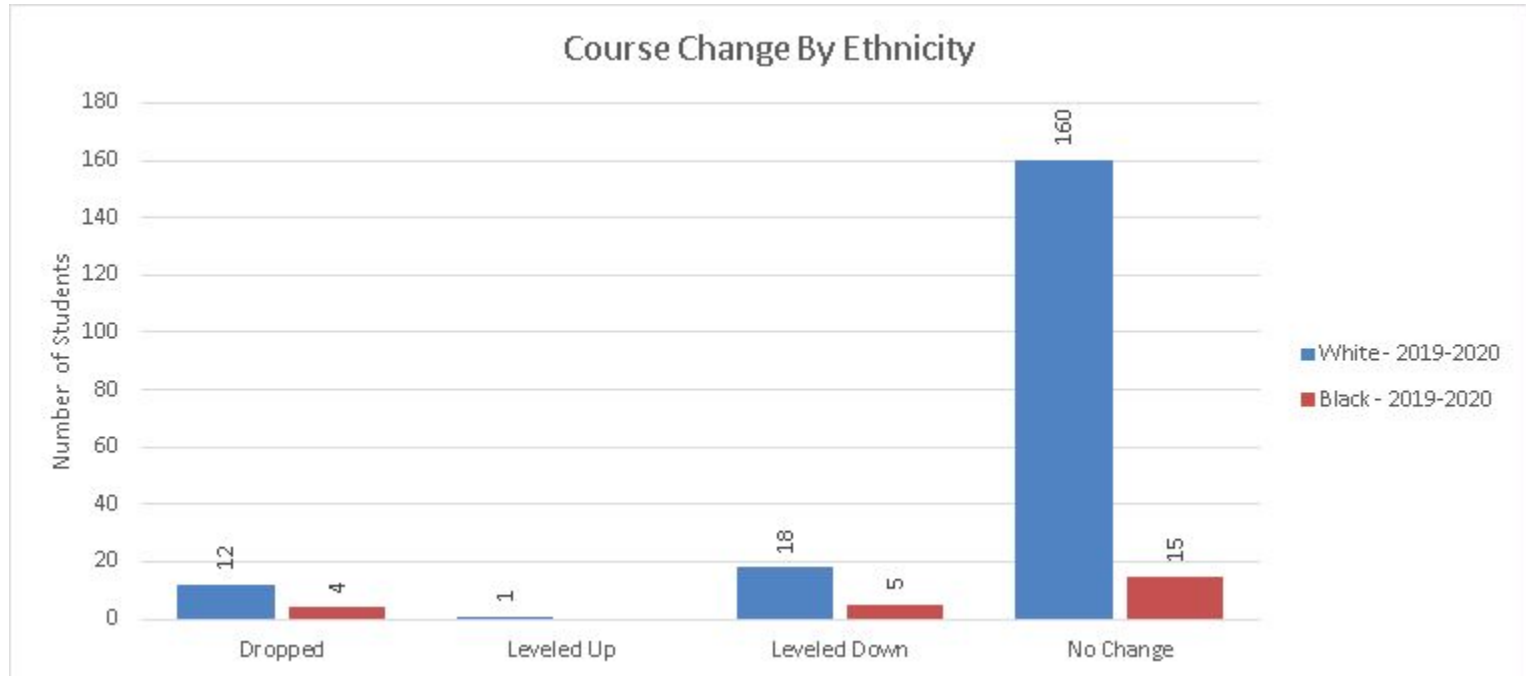
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CHS AP



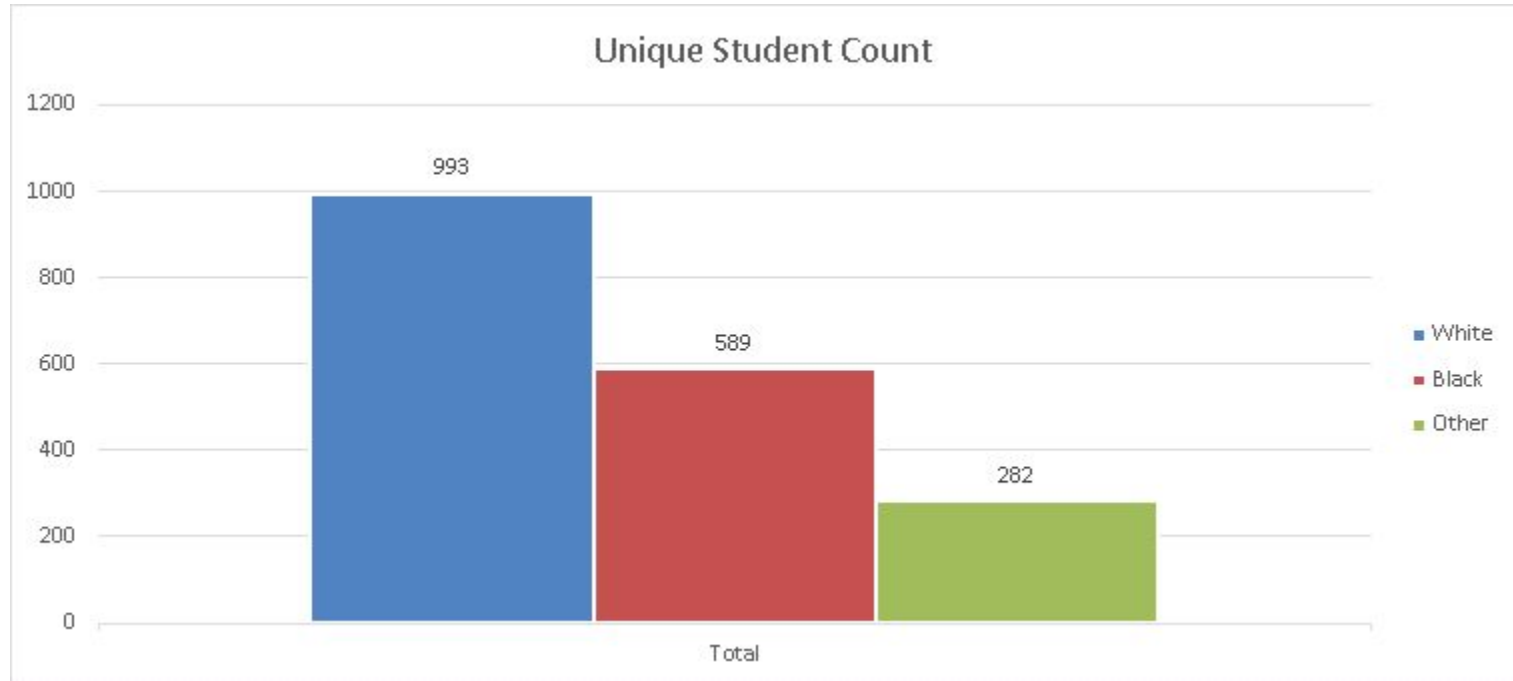
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CHS AP



Adds/Drops Percentages and Connection to A&E

CHS 19-20



Advanced Placement



Summer Assignments

Description Summer Assignments (Secondary)

- CHS Summer Math Assignments All assignments review concepts from prior courses that the new course will build on. Most are only recommended assignments that also include answer keys for self-assessment. AP Calculus (AB & BC) are the only math courses with a required summer assignment as they have the most strict timeline to complete their curriculum.

Course			Comments
Algebra 1	Summer Packet	Extra Help	Recommended summer work.
Geometry	Summer Packet	Extra Help	Recommended summer work.
Algebra 2	Summer Packet	Extra Help	Recommended summer work.
PreCalculus (Academic)	Summer Packet	Extra Help	Recommended summer work.
PreCalculus (Honors)	Summer Packet		Recommended summer work.
AP Calculus	Required Summer Assignment		Required summer work for AB & BC. <u>A test on the summer packet will be given</u> during first week of school and will count toward Quarter 1 grade.
Calculus 3	Summer Packet	Extra Help	Recommended summer work.

AP Summer Assignments-Why? How?

- AP Calculus Assignment (the only AP math assignment) opens with a note -This assignment is designed to review and reinforce algebraic and trigonometric concepts. By covering this material right away, we will be able to begin learning calculus within the first week of school. Remember, the goal is for you to understand the material thoroughly so that we can focus on the calculus material immediately when the school year begins.

9th graders Biology						Within Demographic Course Distribution		
		Black	White	Other		Black	White	Other
Biology	195	103	63	29		66%	27%	36%
Biology - Honors	270	52	167	51		34%	73%	64%

9th graders Social Studies					Within Demographic Course Distribution			
		Black	White	Other		Black	White	Other
World History - 2	140	91	33	16		56%	14%	20%
World History - 2 Honors	328	68	195	65		42%	85%	80%

What can we do now...

- Should we rethink some of our A&E methodology?
- What modifications should/could be made?

What can we do now...

Should we rethink some of our A&E methodology?

What modifications should/could be made?

- Targeted outreach to increase the number of Black Math and STEM teachers in SOMSD
- Sharing out with community the movement of white students into higher level classes in real time
- Clarity on our math intervention philosophy. How can we best maximize the additional Math teacher? Use of data warehouse to monitor progress. Supports need to exist within the school day not just Saturday Academy/Achieve tutoring after school.
- Translation of documents/real access for ELL families.
- Connected and consistent implicit bias PD for teachers.

What can we do now...

What can we do immediately (Elementary/Middle/High School)?

- Targeted supports for Black students in honors level classes at CHS to bring down the percentage who drop out of honors (Same for Middle School)
- Vertical articulation (Elem/Middle/High)
- Targeted/job-embedded PD that building administration attends and supports (like TCRWP)

•

AP Access

- Scheduling meetings with school counselors
 - February: Rising Seniors
 - March: Underclassmen

- Piloting AP Core 21-22
 - Peer mentorship/support program in partnership with MAC
 - Student of color assigned as AP Core Leader for each AP section
 - Lead weekly study groups
 - Communicate with teacher weekly

In Closing...

In closing,

This does not conclude this important conversation. We could fill so many more slides with information on this monitoring and assessment. The passion behind this work is palpable both in the public, Board and District. We are all contributors to this advocacy. Access and Equity is more than a position, policy or department, **it has to permeate all of our operations as a District.** We must continue to invest in changing the trajectory...the literal likelihood that our most vulnerable students will be included in our most rigorous offerings.

In support of this work...we are considering investing in a 3rd party to assist in digging through our practices to identify implicit bias as well as students of color who are through no fault of their own not participating in the most rigorous of course though they have demonstrated that they are outstanding candidates.

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