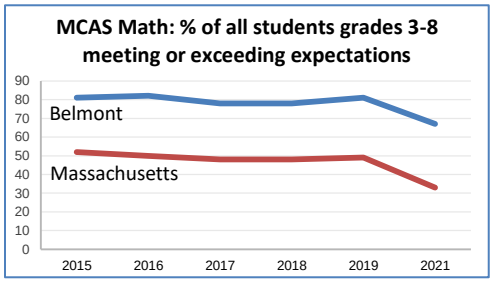
Ensuring Math Excellence and Equity for All Students in Belmont

HISTORY OF ACHIEVEMENT

Belmont has a long history of supporting students in achievement of excellence in math outcomes. Our students have historically far outperformed state expectations. **Even with the pandemic, 67% of Belmont students met or exceeded state math expectations in 2021 vs. 33% statewide.** We absolutely need to meet every student where they are and provide structures for challenge and support.

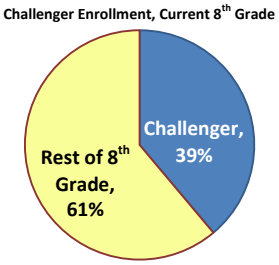


LOSS OF CHOICE

Before 2020, flexibility was central to the Belmont math curriculum and supported our outstanding math outcomes. BPS allowed any student in grades 7-12 to be placed into any math class upon demonstration of subject mastery. **Over 200 Belmont students in 2011-2019 benefited,** helping them reach their full potential.

> It might sound melodramatic, but it changed my child's life trajectory.
>
> – BHS parent, about flexible math placement

In 2019-20, BPS eliminated placement flexibility. The options for students to take Algebra I in 7th grade and Geometry in 8th grade were eliminated, and all BHS math placement tests were eliminated. Parents did not perceive this change in curriculum to be transparent or collaborative.

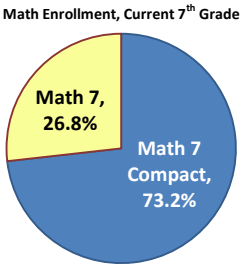


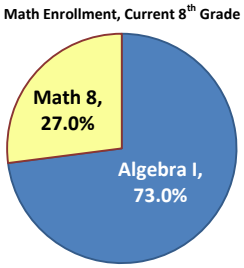
CHALLENGER GEOMETRY – A STEP IN THE RIGHT DIRECTION

In response to strong community pushback, BPS added the Challenger Geometry program for 2021-2022. The new Challenger Geometry program has been wildly popular, with an enrollment of 208 far exceeding the administration's expectation of 50-60. This demonstrates that **for a large portion of the Belmont student population, Algebra I in 8th grade is not enough of a challenge.**

THE CASE FOR 7TH GRADE ALGEBRA

Eliminating Algebra 1 and Geometry as in-school options does not serve our community of math learners. Course enrollment in 7th grade and beyond shows that in Belmont, **large percentages of the student body are ready for math material that is well beyond the state grade-level standards.**





THE TIME TO ACT IS NOW

With the upcoming shift of 7th and 8th grade students to the new wing at the high school, this is an optimal time to reassess how BPS can serve the needs of students as part of the regular school day. **Algebra 1 and Geometry can be offered to 7th and 8th graders at no additional cost to the operating budget, and BPS should once again allow high school students to take math placement exams, which already exist and would be cost-neutral.**

The Belmont community has clearly expressed its demand for flexibility that provides all students the ability to engage in challenging material. Parents want structural solutions to support readiness for math challenge.

Next Steps for Improving the BPS Math Curriculum

The School Committee must act NOW to direct the BPS administration to develop short- and long-term plans to improve flexibility and access in the math curriculum for all students.

ENGAGE MIDDLE SCHOOLERS IN RIGOROUS CURRICULUM

BPS should immediately commit to offering Challenger again next year. That said, Challenger Geometry was intended as a stop-gap until the 7-8 wing of the new school opens in Fall 2023. **A course that enrolls 40% of students in a grade should not be offered as an online extracurricular.** Meeting our students where they are by filling multiple classes of 7th grade Algebra I and 8th grade Geometry would not involve additional hiring, would not impact class size, and would not impair the middle school team model. **At the current Challenger enrollment, Belmont could easily fill 4-5 sections of 8th grade Geometry.**

EMPOWER HIGH SCHOOL STUDENTS AND FAMILIES WITH FLEXIBLE PLACEMENT

BPS should re-implement course selection flexibility at the high school. Lack of flexibility hurts all students; advanced students may remain under challenged and late-bloomers may never realize their potential in the current rigid model. To support flexibility, BHS should immediately re-introduce transparent and accessible placement exams, which are a low-cost means of giving students the agency to select the appropriate math class to meet their needs. **As a systemic solution, BPS should create and support a well-defined process by which any student can demonstrate readiness to move into a math class at a higher level.**

SUPPORT EQUITABLE ACCESS TO MATH EXCELLENCE IN ALL GRADES

BPS core beliefs state "All students are capable of learning at high levels." **To help all our students realize their full potential, BPS must both invest in support structures like math specialists in K-6 and facilitate placement of all students in classes at the appropriate level of challenge.** The presence of a robust ecosystem of highly successful math enrichment programs in town is evidence that demand for both support and challenge is there; however, that demand is not being met by our public schools. When in-school options do not meet student needs, families of means can and do seek external options. **Upgrading support and challenge for all students in-school promotes equity and inclusion.**

> "... until our public schools acknowledge, understand, and serve our most advanced students, our educational system will be elitist. Only those who can afford it will be privileged to see their children's potential blossom."
>
> - Report commissioned by DESE, Presented to the Massachusetts Legislature, June 2019

A WAY FORWARD

Belmont needs to focus both on meeting the needs of struggling learners and meeting the needs of students who are not being challenged. **This is not an either-or situation.** We propose the following timeline:

Spring 2022:	• Publicly commit to offering Challenger Geometry to rising 8th graders for Fall 2022. • Publicly commit to reintroducing flexibility in high school course placement for Fall 2022. • Increase math support in the lower grades through math specialists.
Fall 2022:	• Develop a plan to bring 7th grade Algebra back in school for Fall 2023 in the new school. • Develop a long-term plan to improve support and challenge in K-6 curriculum.
Fall 2023:	• Offer Algebra I in school in 7th grade and Challenger Geometry in 8th grade.
Fall 2024:	• Offer Algebra I in school in 7th grade and Geometry in school in 8th grade.

Additional information and data analysis can be found at belmontmathparents.org