The Calculus Project & Public Schools of Brookline
Memorandum of Understanding

Partnership: Public Schools of Brookline (the district) and The Calculus Project (TCP) agree to partner to replicate the research-supported strategies of TCP to increase the representation and success of Black, Hispanic, Indigenous People of Color, and low-income students in advanced mathematics.

This agreement is made between TCP and Public Schools of Brookline on the ___ day of _____, 2024. By signing this agreement, both parties agree to all of the terms herein.

1. The Calculus Project agrees to provide ongoing support, training, and consulting, specifically:
    a. Templates and tools for each of the seven components of the program.
    b. Facilitated learning for teachers that focus on topics related to the seven TCP components as listed in #1.
    c. An annual TCP review which seeks to identify areas of strength and improvement in implementation of TCP. Findings from the review provide direction for ongoing TCP support. Data from this comes from:
        i. a student survey (summer, end of Q1) and a parent survey (end of Q1) distribution and analysis.
        ii. data sharing amongst districts to identify best practices and areas for growth.
    d. Bimonthly support to TCP Coordinators.
    e. Reduced cost for annual conference for TCP districts for up to 10 teachers (minimum of one day content).
2. Public Schools of Brookline agrees to implement the program with fidelity. Specifically, this means:
    a. Summer Pre-teaching: A summer program is offered to all TCP students with a minimum of 60 hours per course, with at least two math instructors per summer class (at least one instructor is a certified teacher).
    b. Academic Center: TCP students must have access to at least 3 hours of additional math support each week.
    c. Student Grouping: At least 40% of TCP students must be grouped in the same advanced level math classes to hone the collaborative skills they learned during the summer.
    d. Pride Curriculum: All TCP students must have an opportunity to learn about the contributions of people of color to education and STEM.

e. Peer Teacher: Public Schools of Brookline will identify, train, and compensate junior and senior peer teachers to build internal capacity and support
f. TCP Advisory Group: Create an advisory group composed of parents and the following stakeholders (see below). This group should meet three times a year to set goals, review data, solve challenges and share outcomes with key stakeholders.
    - At least two parents from each grade implementing TCP
    - At least two students from each grade
    - At least one math teacher
    - At least one building administrator (e.g., Math department head, Assistant Principal or Principal)
    - At least one senior central office administrator
g. Professional development: Engage in TCP led professional development for educators

3. Public Schools of Brookline will Identify and compensate a Calculus Project Coordinator to oversee the program and serve as the TCP point of contact. This position should be commensurate with the responsibilities of the role and increase in FTE as the program becomes fully enrolled.
4. The district will work to engage at least 3 external partners who support the work.
5. Annually, the district will share a course roadmap with all stakeholders that demonstrates viable pathways for students to reach AP Calculus.
6. The district agrees to administer, collect, and share the following data (listed below) in non-identifiable student format, for the purposes of research and grant reporting. TCP will provide a template to fill out. Schools agree to share this data with TCP, TCP funding partners or other designated research firms.
    - Grade level demographics of students in The Calculus Project, including race/ethnicity and low-income status.
    - Course placement data for TCP students and comparison to school-wide placements disaggregated by race/ethnicity and low-income status.
    - Annual MCAS data, including scaled score, performance level and average SGP, sorted by race/ethnicity and low-income status.
    - Annual AP Calculus exam results from TCP students sorted by race/ethnicity and low-income status.
    - First semester grades for TCP students.
    - Annual TCP teacher, student and family survey.
7. Consistent funding is paramount for TCP student success. Therefore it is expected that the district will incorporate measures to ensure consistent funding each year. This could be evidenced in a budgetary line item for TCP.
8. Public Schools of Brookline can only use The Calculus Project name as long as they are fully (or making progress towards) implementing all components of TCP as a member of the

Consortium. Additionally, the district agrees to notify The Calculus Project about fundraising proposals in order to coordinate overall fundraising efforts.

9. The district agrees to pay the annual TCP membership fee of $10,000 for the 2024-2025 school year by June 1, 2025.
10. Note that the annual TCP membership fee for the following year (2025-2026) will be $12,000.

Terms of Agreement

This is a one-year agreement which will remain in effect until June, 2025 and shall be automatically renewed for one year periods thereafter, unless either TCP or Public Schools of Brookline notifies the other at least 6 months in advance with its intention to terminate in the following school year.

The parties enter into this agreement freely and in good faith evidenced by their signatures below.

The Calculus Project
Dr. Adrian Mims, Founder & CEO

_____ _____
Signature Date

Public Schools of Brookline

Name: _____, Title: _____

_____ _____
Signature Date

Appendices: Metrics, Data Sharing and FAQs

1. Metrics:

Below is a framework for measuring success of a fully built-out TCP program. Our theory of action is that by setting up a sustainable structure that allows for increased representation we will achieve our goal of **excelling students**.

Category	Metric	District Target
Excelling students	• 10th grade math MCAS scores for TCP students	Parity (or better) than school-wide
	• Average SGP for TCP students	> 50
	• Average AP Calculus exam scores for TCP students	3
	• % TCP students participating in postsecondary remedial math coursework	0
Increased represen-tation	• Black, Hispanic and low-income student representation in advanced math courses	≥ representation in school
	• TCP student retention rate (start of program to graduation)	70%
	• % of TCP students who start and successfully complete high school Calculus class	90%
Sustainable Structure	• District has received commitment from school and district leadership	Yes
	• District implements all major elements of the TCP model	Yes
	• District has established and filled positions to oversee ongoing TCP work	Yes
	• District has an established and active Parent Advisory Committee	Yes
	• District has completed and makes public annual data reporting (from TCP performance review)	Yes
	• District has 3+ external partners engaged in and/or supporting the work	Yes
Ongoing Commitment	• District financial commitment to supporting TCP students	District budgets for full support of students in TCP each year
	• District program commitment to participating in TCP network	District staff participate in ongoing sharing across TCP sites
	• District gathers feedback from all stakeholders annually	District gathers annual feedback from all stakeholders

2. Data Collection

TCP will work with the district to capture the following data on an annual basis.

	DATA POINT
Increased representation	• Black, Hispanic and low-income student representation in advanced math courses
	• TCP student retention rate (start of program to graduation)
	• % of TCP students who start and successfully complete high school Calculus class
Excelling students	• First quarter grades for TCP students
	• 10th grade math MCAS scores for TCP students
	• 8th and 10th grade math SGP for TCP students
	• Average AP Calculus exam scores for TCP students
	• % TCP students participating in postsecondary remedial math coursework

3. Frequently Asked Questions

1. Can you give an example of how other districts have 3+ external partners engaged? Is this a financial engagement?

Not all of the districts have at least three external partners. However, this is a goal to work towards and TCP Inc. will support this through our networking. All external partnerships may be financial and/or in-kind support(services). For example, Newton received a grant from the Akamai Foundation to support TCP. Hence the Akamai Foundation is considered an external partner. Orange County Public Schools in Orlando has a partnership with the University of Central Florida and Mathnasium to provide math support during the summer. One way to cultivate these partnerships is by tapping into the parents who have children in TCP. They may work for STEM companies or know people who may be willing to sponsor a field trip, identify guest speakers, or make donations.

2. How is student retention in TCP measured? Summer attendance? Tutoring Center attendance?

The four components of TCP that define a student's participation are as follows: a) Summer Academy, b) The Academic Center, c) Enrollment in a clustered section, and d) Working as a peer teacher. If a student participates or has participated in at least one of these supports, they are considered a member of TCP. Retention is defined as a student who is participating in at least one of these supports divided by the total number of students who started TCP.

Summer attendance is taken and documented like the attendance during the school year. Academic Center (tutoring) attendance is tracked by students signing in. Some schools have the academic center added to a student's schedule as a math lab. Attendance is taken as if it is a regular class.

3. Can you provide clarification on the metric about Black, Hispanic, and low-income student representation in advanced math courses?

If TCP is successful, at the very least, the percentage of Black and Latino students in the student body should be comparable to the percentage represented in honors and advanced level math classes that lead to (and include) AP Calculus or High School Calculus. For example, if 20% of the student body in a high school identifies as Black/African American, you should have at least 20% of the students in your honor and advanced math classes identifying as Black/African American.

4. In Sustainable Structure, first metric, District has received commitment from school and district leadership. How is this measured or monitored? We have verbal support and consistent financial support to a point, but nothing formal in terms of an agreement.

The commitment will be documented in a Memorandum of Understanding (MOU) between the school districts and The Calculus Project Inc. The mission of TCP is anchored by the core values and strategic plan of school districts that offer TCP. If TCP is helping school districts honor their core values and strategic plan, districts must make a financial commitment within their budgets to ensure consistent results over time. An example of a financial commitment may include, but is not limited to, establishing a line item within the district's annual budget. This will not only foster consistent performance results, but will provide a foundation for financial sustainability.

5. ***In the same section, has there been any thought to adding a metric about professional development for educators who work in the program? This is something we need to do a better job of and would like some support with.***

One of the requirements in the MOU is that all teachers in the math department receive ongoing professional development. Professional development is especially important as the program expands because more math teachers will need to be involved. It is our goal to integrate TCP within the culture of math departments because there has to be an ongoing commitment to equity for TCP to operate at its optimum.

6. ***Last section of Ongoing Commitment, "District financial commitment to supporting TCP students", District budgets for full support of students each year. Is the intent here that the program becomes a line item in the budget and the district covers 100% of the cost? That would be ideal!***

Student performance data have shown TCP is significantly narrowing the achievement gap in mathematics for a fully developed program at a cost less than .5% of a school district's budget with an approximate cost of $500 per student. A potential partnership with TCP Inc. may decrease that expense even more. Given the small amount of funds needed to sustain TCP, it is an expectation that districts at least make a financial commitment to incorporate a line item into the budget.

7. ***Why is there a fee?***

The fee helps to offset the cost of the consulting services we provide as well as the licensing of the name/trademark. Each district is supported by a Program Support Manager employed by The Calculus Project Inc. Each year The Calculus Project agrees to provide ongoing support, training and consulting, specifically:

   a. Bimonthly support to TCP Coordinators.
   b. A TCP manual, annually updated with templates and tools for each of the seven components of the program.
   c. Facilitated learning for teachers that focus on topics related to the seven TCP components as listed in the MOU.

d. An annual TCP review which seeks to identify areas of strength and improvement in implementation of TCP. Findings from the review provide direction for ongoing TCP support. Data from this comes from:
    i. A student survey (summer, end of Q1) and a parent survey (end of q1) distribution and analysis
    ii. Data sharing amongst districts to identify best practices and areas for growth.
e. Reduced cost for annual conference for TCP districts for up to 10 teachers (minimum of one day content).