

## **Brookline Middle School Schedules**

# **Findings from Analysis of Current Use of Time, Course and Staffing Practices, and Comprehensive Stakeholder Engagement**

**Public Schools of Brookline**

**February 2023**



**New Solutions K12**

## Introduction

The Public Schools of Brookline is focused and committed to ensuring that its course offerings and staffing practices optimize student outcomes. In this spirit, the district has partnered with the Boston-based education firm New Solutions K12 on an effort to analyze schedules, use of time, and current course and staffing practices at the middle school level.

The following document outlines findings from a series of quantitative analyses that examined how time is currently allocated and how staff are currently assigned in schedules at the district's eight middle schools. This report highlights a set of commendations, findings, and practices to consider for school and district leaders to review as they evaluate existing schedules and consider what potential changes to make to schedules in the future.

In addition to the analyses and findings outlined in this report, New Solutions K12 also conducted a series of interviews and focus groups with district leaders, school leaders, school staff, students, and families to collect perspectives on current scheduling and staffing practices and inform future schedule decisions.

## Methodology

Multiple analyses and rounds of stakeholder engagement were conducted to examine how and how well time and staff are currently used at the middle schools in the district. The results of these analyses are meant to help inform future decisions district and school leaders make about school schedules for the 2023-2024 school year and beyond.

### Stakeholder Engagement

The New Solutions K12 team engaged with multiple stakeholders from June – December 2022. The goal of stakeholder engagement is to provide stakeholders an opportunity to offer input on the future vision of middle school schedules in the district. This engagement included 30–60-minute interviews and focus groups with Brookline students, staff, and families, in addition to sending out student surveys to Brookline students. For staff who were unable to attend a focus group, staff had an opportunity to complete a survey to provide their input. There were three main questions that were asked throughout each stakeholder group:

- What about current schedules work well? Why?
- How could current schedules be improved to better and more equitably serve all students?
- What priorities and student needs must any future schedule options address?

In the second round of engagement, New Solutions K12 spoke with school-based educators, students, current 11<sup>th</sup> and 12<sup>th</sup> grade Brookline students, and families. The purpose of this round was to build a broad and deep understanding of current strengths and challenges in the schedule across a wide range of stakeholder groups. As part of this round, New Solutions K12 also hosted a focus group with Brookline Educators Union leadership to build understanding of current collective bargaining agreements and ensure any potential recommendations are informed by existing collective bargaining requirements.

In total, New Solutions K12 spoke with approximately 300 teachers, staff, students, and parents/families across the district. Two surveys were also conducted—one of current middle school students and a second of current

high school students—the weeks of December 12<sup>th</sup> to December 23<sup>rd</sup>. A comprehensive list of stakeholders engaged can be found in the appendix.

### **Use of Time Analysis**

School year 2021-2022 bell schedules were examined at the middle schools. The purpose of doing so was to determine how much time, on average, a “typical” student spends over the course of a school year in:

- Core and non-core instruction
- Non-instructional activities
- Academic intervention (e.g., WIN)
- Structured relationship building (e.g., advisory)
- Other uses of time

This analysis helps highlight commonalities and differences between schools and whether the schools are above or below use of time benchmarks New Solutions K12 has seen in its work with hundreds of schools across the country. Schedules for students with disabilities and English learners were not examined as part of this project.

### **Course and Staffing Analysis**

A detailed analysis of course and staffing practices was also completed for the middle schools. To analyze the staffing of the schools, New Solutions K12 gathered extensive quantitative data related to the schedule, course offerings, student enrollment, and staffing from the 2021-2022 school year. The data collection and analysis process involved follow-up calls with school-based administrators, as necessary, to clarify data questions and better understand how schedules are created and how staffing assignments are made.

The analysis was designed to help answer important questions including:

- How much staff is needed in each department based on student needs and district set class size guidelines?
- Are existing class size guidelines reflected in the schedule?
- Do any policies or practices raise costs without adding equal benefit to students or staff?
- Can existing staff provide more offerings to students such as interventions or electives?
- Which departments have capacity to offer more course offerings, expanded intervention or new enrichment services?

## **Note About the Data**

While New Solutions K12 has taken significant measures to validate the accuracy of data provided, there may be cases where the data from the school’s SIS is insufficient or inaccurate to describe use of staffing and other resources. The data has been reviewed by principals and central office staff, but should of course be revalidated before major change. Implementing any of the opportunities requires careful planning, coordinated managing of course offerings, staffing, and scheduling.

Additionally, given the intentionally extended duration of this project, many schools have already made adjustments, shifts, and improvements to schedules and staffing practices since 2021-2022 data was examined. The analyses included in this report should therefore be seen as a snapshot in time of district practices.

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## Commendations

### **1. The teachers and staff of the Public Schools of Brookline are dedicated to providing exceptional learning experiences and opportunities to students at the middle school level.**

Teachers, staff, school leaders, and district leaders shared a common commitment to serving students well and providing the best possible education to students of all needs in the district. Educators throughout the district are talented, creative, and consistently seek to provide high-quality, relevant, and progressive learning opportunities to students. Many engaged parents and families expressed satisfaction with the learning experiences of their students and the quality of teachers in the district. Representative quotes from parents and families include:

- “We continue to feel we are in one of the best public school systems in the state.”
- “My daughter never wakes up not wanting to go to school—she is having a really good experience.”
- “Teachers are engaged, I’m really happy with my kids’ experiences. My kids are good consumers of education and they are happy with their teachers. There is a real passion and desire to see students learn and succeed.”

### **2. There is a common belief in the power and potential of the K-8 model across the district.**

Many teachers, parents, school leaders, and district leaders are proud of the K-8 model and excited by the unique opportunities it offers to shape student learning and growth. Benefits of the K-8 model commonly highlighted by stakeholders include the opportunity for students in middle school grades to work with and mentor students in elementary grades; the continuity and strength of community and relationships between students, teachers, and staff developed over many years; and the minimization of transitions (i.e., no transition to a new building between elementary and middle school). Representative quotes about the K-8 model from stakeholders include:

- “We love the K-8 model—there is something very special for students being in the same school for that long.”
- “There is a lot of beauty in watching and helping a student progress over 9 years. The K-8 model allows us to create a very nurturing environment for students.”
- “A benefit of being K-8 is that if a middle school student is struggling, middle school teachers can go to elementary school teachers for support and suggestions.”
- “We moved here as a family because of the K-8 model. We felt, socially, it would support our kids the best.”

### **3. The district provides students early and continuous learning opportunities in world languages and music across all middle schools.**

Students have access to Spanish beginning in kindergarten. Beginning in 6<sup>th</sup> grade, student can choose between Spanish and French or Mandarin. Students take world language 3x/week in 6<sup>th</sup> grade and 5x/week in 7<sup>th</sup> and 8<sup>th</sup> grade. Mandarin Chinese is offered at Pierce and Driscoll middle schools instead of French.

The district also has a coordinated music program, known as conservatory, that is available to students grades 4-8. As part of this program, students can choose from six different music offerings: band, chorus, music exploratory, guitar/ukulele, music production, and orchestra.

### ***World Language***

- “Brookline Middle Schools have an excellent world language program. It’s good to be every day, good that they are trying out standards-based grading.” – Brookline parent
- “I like that the middle school world language classes meet five times a week and that the world language teachers are all included in all collaborative planning time meetings with all grade level colleagues.”

### ***Music/Conservatory***

- “What works well about the current schedule is music. Students have a lot of choice in grades 6-8 with six different music options.”
- “Thinking of conservatory from the student perspective, it allows them to intermingle with kids who are not in their homeroom or grade. It is an interesting co-mingling that is otherwise not offered in schools.”
- “Starting in 4<sup>th</sup> grade, every kid gets to play an instrument across all schools during the school day, which makes conservatory equitable.”
- “One thing that works well about the schedule is conservatory. It is very successful in creating time for teacher collaboration and at the same time allows for student choice.”

## **4. The middle schools actively facilitate programming to address student social-emotional needs and help students navigate the challenges of being a young adolescent.**

Research is clear that middle school students’ sense of belonging at school is associated with a variety of outcomes, including increased motivation, engagement, academic achievement, and a decrease in absenteeism and at-risk behaviors. Educators in the district work hard to develop strong, authentic relationships with students.

Each of the middle schools provide programming and opportunities for structured relationship building between students and teachers. At most middle schools, this takes the form of an advisory program ~1-5x a week that helps students develop executive functioning skills, social-emotional learning (SEL), and community building. A health class is also offered district-wide 2x/week in 7<sup>th</sup> and 8<sup>th</sup> grade to teach sexual education, mental health education, social-emotional learning. The district also added an adjustment counselor at each middle school ~two years ago to further support student social-emotional and mental health needs.

- “Social-emotional support is done well. I’m impressed with SEL education in the district—kids are well informed and scientifically so.”
- “6<sup>th</sup> grade advisory is really beneficial as students transition from 5<sup>th</sup> to 6<sup>th</sup> grade. It’s a time to address issues, have restorative circles, and problem-solve.”
- “In advisory, we are using the activities we’ve made for social-emotional gaps since COVID and trying to use advisory to build pro-social skills.”

## **5. Middle school schedules create multiple opportunities and time for staff to collaborate across grade levels, content areas, and roles.**

Many middle school teachers across subjects noted numerous opportunities embedded in their weekly schedule to collaborate with colleagues. Specific examples include:

- Contractually required 40 minute (minimum) daily planning period for all teachers
- Some teachers at some schools have more than one planning period per day
- Weekly teacher collaboration time on Fridays from 1:40 – 2:20pm as a result of the early dismissal of students
- A twice weekly collaboration time of ~45 minutes for teachers of similar grade levels that is created as the result of conservatory programming

In addition to having dedicated collaboration time, teachers and staff shared a common and healthy spirit of collaboration with the goal of improving learning for their students. Many teachers and staff highlighted the importance and value of meeting with their colleagues across grade levels and content areas, including collaboration between general education teachers and their special education and EL teacher peers.

- “On Tuesday’s there is a meeting time for staff. ELA teachers meet every Friday to plan for the next week. On Tuesday and Thursday, there is an extra prep period. It is up to teacher discretion to have meetings during prep period.”
- “There are two dedicated meeting times for collaboration with special education (CPT and consult) by grade level. There are already established meetings created for teams.”
- “Grade level teams are all on and off simultaneously for meetings and collaboration. We do a lot of collaboration together.”
- “What works well about the current schedule is the ability to have common planning time with grade level colleagues. We are allowed to meet with colleagues one time per week. Going to them is something I appreciate in my schedule.”
- “We now have more time built into schedules for teachers to collaborate. There are set times for team time, set time for grade level educators to meet with special education teachers, EL teachers. There is built in opportunities for professional collaboration.”

## **6. Many students, teachers, and staff appreciate and value the rotational aspect of middle school schedules and the fact that students take classes at different times over the course of the week.**

All middle schools in the district employ a rotation in their schedule in which the time-of-day students take classes shifts depending on the day. For example, a student may take math first period on Monday, third period on Tuesday, and seventh period on Wednesday. Staff and students expressed significant support for the schedule rotation and the variety it provides.

- “What works well about the current schedule is having classes meet at different times throughout the day and the week.”



- “The schedule rotation is good; you get to see kids at different times of the day.”
- “For the students, it is great that they don’t have academics each day. It is good for us too. Each day we’re only doing three classes, it is not the same lesson each day. It is fun, fresh, and not back-to-back.”
- “What works well about the current schedule is that academics are spread out from day to day. Certain days have different classes, it doesn’t follow the same schedule every day.”

**7. Many teachers at middle schools with ~60-minute academic periods value the benefits provided by a relatively longer period length.**

Three schools in the district (Lawrence, Baker, Ridley) run approximately 60-minute periods for core classes 4x/week. Many teachers at these schools expressed satisfaction with the length of class periods, noting that 60-minute periods allow for ample time for a variety of instructional approaches and learning activities. This is reportedly especially the case for science classes.

- “What works well about the current schedule is that the longer blocks (60 minutes) are nicer than the 45-minute blocks.”
- “I like that science classes are 60-minute periods. It is enough time to do labs.”
- “I love the hour-long classes. I love teaching science and health flex.”
- “I love the current schedule because I feel like a 60-minute class lets us get settled in and not rushed.”
- “I like how there is one hour for each class, it’s the right amount of time.”

## Executive Summary of Findings

**Finding 1: There is no comprehensive middle school “baseline” across the eight 6-8 schools, which results in inequitable student experiences, access to instruction, and preparation for high school.**

**1a. Time is allocated differently across all eight schools and across grade levels within some schools.**

**1b. The difference in how time is allocated across schools is driven partially by differing academic period lengths (e.g., 45 min vs 60 min), which in most cases is not connected to an explicit strategy or vision for learning.**

**1c. The amount of annual time on learning a student receives in a given subject can vary considerably between schools and across grade levels in the same school.**

**1d. Variation in amount of learning time and middle school experience provides students with perceived different levels of preparation for high school.**

**Finding 2: The middle schools do not universally provide best practice academic intervention or acceleration to students.**

**2a. While nearly all schools offer a “What I Need” (WIN) block, the duration and frequency of this block differs by school and grade level, and the use of the block is not consistently aligned to best practice.**

**2b. Very few, if any, content-specific academic intervention courses are available to students at the middle school level struggling in math or literacy.**

**Finding 3: The district values and is thoughtful about supporting the social-emotional needs of middle level learners, but under-invests in best practices to build student engagement and agency.**

**3a. While an advisory period is offered at all middle schools, the duration and frequency vary by school and grade and is not consistently aligned to best practice.**

**3b. Middle school students have consistent and nearly identical access to classes in art, music (conservatory), physical education, health, and world language, regardless of interest or prior experience.**

**3c. Many students and families shared a perceived lack of afterschool clubs and activities for students to engage in.**

**Finding 4: There is no universal expectation or definition of what constitutes a “full” workload for middle school classroom teachers, which results in uneven use of teacher time and talent.**

4a. The amount of time core teachers spend delivering instruction in their subject in a given week varies across and within schools.

4b. Given the district has 8 relatively small middle schools, each with varying enrollment, core teachers at smaller schools in the district inevitably teach more grades and/or subjects than teachers in larger schools.

4c. Many world language teachers in the district expressed a high level of frustration regarding current instructional workloads and range of grade levels taught.

**Finding 5: There is opportunity to staff more closely to enrollment and adjust class sizes to reflect ongoing changes in student enrollment in the district.**

5a. The district has seen shifts in enrollment over the past decade, including growth pre-pandemic, a decline as a result of the pandemic, and a more recent uptick since the pandemic, but staffing hasn’t adjusted as quickly as enrollment shifts.

5b. Average class sizes vary considerably across middle schools, and it is unclear whether existing district class size guidelines represent the ideal class size or a “worst case” scenario. Additionally, absent a universal definition of what constitutes an “average” teacher workload, staffing precisely to enrollment is impossible.

**Finding 6: There is no district-level point person to direct, monitor, or support the development of middle school schedules.**

6a. Some district guidelines regarding middle school instruction, programming, and use of time exist, but are not always followed with fidelity at the school level.

6b. There is no documented process, owner, or timeline at the district level to manage and coordinate the scheduling process at the middle school level.

6c. The district currently lacks effective systems to collect, validate, and analyze school-level staffing and schedule data.

6d. The level of staff technical scheduling skills varies between middle schools, with limited to no support available from the district for school-based leaders and schedulers.

6e. Many teachers and staff shared that the frequency, degree, and perceived lack of communication regarding changes to middle school schedules is challenging.

**Finding 7: The district's current approaches to music (conservatory) programming as well as shared staff in select subjects have a disproportionate impact on middle school schedules.**

**7a. Timing of conservatory classes are coordinating centrally and are the first "block" of time scheduled at the 8 middle schools, which therefore impacts all other scheduling choices.**

**7b. The district's current approach to sharing staff both across schools as well as between elementary and middle school grades within a school is simultaneously cost-effective and limiting.**

**Finding 8: The district intentionally does not currently provide advanced-level academic courses at the middle school level.**

**8a. The district moved away from offering "gifted and talented" programming and advanced-level academic courses to students and currently only offers one academic level of each course at each grade level.**

**8b. Many students and parents expressed a high-degree of interest in the district providing more opportunities to challenge students, especially in math.**

## Finding 1: There is no comprehensive middle school “baseline” across the eight 6-8 schools, which results in inequitable student experiences, access to instruction, and preparation for high school.

The district currently lacks a unified vision for middle school grades (6-8) across the eight K-8 schools. Many stakeholders reported that there is no consistent philosophy or documented set of priorities to guide middle school programming, staffing, and instructional decisions. As one school leader noted, “We have a system of separate schools, rather than a united school system of K-8s.”

In the absence of a fully cohesive middle school vision, the schools have pursued different and varying approaches to crafting a middle school experience for students. The current variation and challenges associated with the middle school grades are the result of many decisions over a long period of time rather than by design by any one person or groups. Important factors that have influenced the middle school model over time include:

- **School-Level Autonomy:** School principals at the eight K-8 schools have historically had a significant degree of autonomy over scheduling and programming. This level of autonomy is highly valued and is perceived as part of what makes Brookline unique. This has allowed schools to adjust practices over time based on changing student need, staff expertise, and principal direction and preference. Guidance from the district for how time in the schedule should be structured or used had traditionally been relatively limited. As one school leader shared, “We had instructional minute requirements at some point before the pandemic, but people ignored them and there was no accountability from the district to follow them. Does the district even put out learning minute requirements anymore?”
- **Facilities:** Each of the eight K-8 school buildings have different and unique layouts and facility constraints that must accommodate both elementary (K-5) and middle school (6-8) programming and scheduling. The size and usage of school cafeterias and gymnasiums can have significant impact on schedule options and make certain universal standards challenging.
- **Shared Staff:** Some middle school teachers and staff work at both the elementary (K-5) and middle school (6-8) level at their building. Other middle school teachers and staff are shared across buildings and teach at multiple middle schools. Sharing within a building (i.e., between K-5 and 6-8) and across buildings is most common among world language, art, music (conservatory) and wellness teachers. The sharing of staff is well-intentioned and cost-effective, though puts additional scheduling constraints on schools and leads to variation in schedule practices.
- **Student Enrollment:** Grade 6-8 enrollment varies between 148 students (Heath) and 275 students (Pierce) at the district’s eight middle schools. Differently sized schools create different staffing needs and teacher workload expectations and can make it more challenging to implement programming consistently across schools.

A full summary of SY2021-2022 middle school enrollment is below.

**Figure 1.1 Student Enrollment at Brookline Middle Schools  
SY21-22**

| School Name                  | 6th Grade Enrollment | 7th Grade Enrollment | 8th Grade Enrollment | Total Enrollment |
|------------------------------|----------------------|----------------------|----------------------|------------------|
| John Pierce School           | 79                   | 93                   | 103                  | 275              |
| Florida Ruffin Ridley School | 86                   | 85                   | 89                   | 260              |
| Edith C. Baker School        | 63                   | 86                   | 56                   | 205              |
| Amos A. Lawrence School      | 70                   | 62                   | 57                   | 189              |
| John D. Runkle School        | 60                   | 59                   | 62                   | 181              |
| Michael F. Driscoll School   | 54                   | 63                   | 54                   | 171              |
| William H. Lincoln School    | 53                   | 57                   | 57                   | 167              |
| Heath School                 | 47                   | 55                   | 46                   | 148              |

This variation in enrollment results in a different number of sections at each middle school. One section represents one “class” of students. A full summary of SY2021-2022 middle school section counts is below.

**Figure 1.2 Section Count at Brookline Middle Schools  
SY21-22**

| School Name                  | 6th Sections | 7th Sections | 8th Sections | Total Sections |
|------------------------------|--------------|--------------|--------------|----------------|
| John Pierce School           | 4            | 5            | 5            | 14             |
| Florida Ruffin Ridley School | 4            | 4            | 4            | 12             |
| Edith C. Baker School        | 4            | 4            | 3            | 11             |
| Amos A. Lawrence School      | 4            | 3            | 3            | 10             |
| Heath School                 | 3            | 3            | 3            | 9              |
| John D. Runkle School        | 3            | 3            | 3            | 9              |
| Michael F. Driscoll School   | 3            | 3            | 3            | 9              |
| William H. Lincoln School    | 3            | 3            | 3            | 9              |

The 86 students in the 6<sup>th</sup> grade at Ridley, for example, are grouped into four classes (or sections) at any given time, while the 53 students in 6<sup>th</sup> grade at Lincoln are grouped into three classes (or sections) at any given time. Different number of sections at each grade level and school result in different staffing figures and teaching assignments across schools. Teaching assignments for 8<sup>th</sup> grade math illustrate this point:

- An 8<sup>th</sup> grade math teacher at Ridley teaches four sections of 8<sup>th</sup> grade five times a week
- An 8<sup>th</sup> grade math teacher at Lincoln teacher three sections of 8<sup>th</sup> grade math five times a week and two sections of 7<sup>th</sup> grade math five times a week
- An 8<sup>th</sup> grade math teacher at Pierce teaches five sections of 8<sup>th</sup> grade five times a week

While the district lacks a clear vision for middle school grades, there is some consistency of practices across the eight middle schools, as outlined in the left column of figure 1.3 below.

**Figure 1.3 Consistent and Variable Schedule and Programming Practices at Brookline Middle Schools SY21-22**

| Consistent Schedule and Programming Practices<br>Across the 8 Middle Schools                                                                                                                                                                                                                                                                                                                                                                                 | Variable Schedule and Programming Practices<br>Across the 8 Middle Schools                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Start of school day</li> <li>• End of school day</li> <li>• Frequency of art (1x/week all year, grades 6-8)</li> <li>• Frequency of PE (2x/week all year, grades 6-8)</li> <li>• Frequency of (health 2x/week all year, grades 7-8)</li> <li>• Frequency of (conservatory 2x/week all year, grades 6-8)</li> <li>• Frequency of world language (3x/week all year, grade 6, 5x/week all year, grades 7-8)</li> </ul> | <ul style="list-style-type: none"> <li>• Duration and frequency of core periods (ELA, math, science, social studies)</li> <li>• Duration of non-core periods (art, PE, health, conservatory)</li> <li>• Duration of world language periods</li> <li>• Duration and frequency of WIN block</li> <li>• Use, duration, and frequency of advisory period (or equivalent)</li> <li>• Use of “What I Need” (WIN) block</li> <li>• Duration and frequency of teacher planning/prep periods</li> <li>• Duration of lunch and recess</li> <li>• Duration of transition times between classes</li> </ul> |

Due to common start times and end times, middle school schedules run for the exact same number of minutes per week (1900 minutes). Additionally, the schools offer a common set of “specials” or non-core classes to students, including visual art, physical education, health, music (conservatory), and world languages classes. These are offered with the same frequency all year long at all schools.

Beyond these similarities, however, the middle schools are different in many ways. This is especially the case in four important ways:

**1a. Time is allocated differently across all eight schools and across grade levels within some schools.**

The school day for students in grades 6-8 at all eight K-8 schools in the district runs from 8:00am – 2:30pm Monday – Thursday and 8:00am – 1:40pm on Fridays. Middle school bell schedules from the 2021-2022 school year were examined to assess how time is allocated and what percent of the day at each grade level is devoted to different activities. The purpose of this analysis was to document how much time a “typical” student spends in different courses and activities over the course of a school year.

The five categories of time examined were:

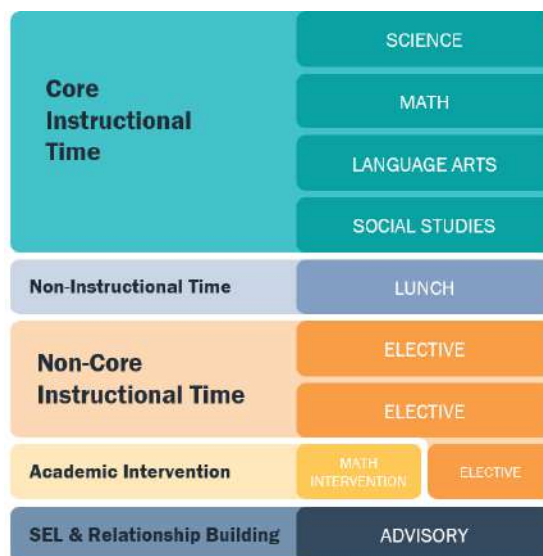


Figure 1.4 Five categories of time within a school schedule with sample subjects.

This analysis intentionally does *not* account for the many unique student schedules, including for students with IEPs or English learners, and therefore is meant to provide a general overview of how time is used at each school rather than a precise measure that represents all students.

Initial analysis showed that how time is allocated within middle schools varies by school as well as grade level.

**Figure 1.5 Range of Percent of Annual Time Devoted to Categories of Time SY21-22**

| Category                         | Class/Activities Included in Category                                 | 6 <sup>th</sup> Grade | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
|----------------------------------|-----------------------------------------------------------------------|-----------------------|-----------------------|-----------------------|
| Core Instruction                 | ELA, Math, Science, Social Studies                                    | 47-59%                | 47-51%                | 47-51%                |
| Non-Core Instruction             | Art, Conservatory, Health*, Physical Education, STEAM, World Language | 18-24%                | 26-30%                | 26-31%                |
| Non-Instructional Time           | Homeroom, Lunch, Recess, Transition Time                              | 14-19%                | 12-19%                | 12-19%                |
| Academic Intervention            | What I Need (WIN), Tutorial                                           | 4-12%                 | 2-7%                  | 2-7%                  |
| Structured Relationship Building | Advisory, Homeroom**                                                  | 1-9%                  | 0-6%                  | 0-6%                  |

\*Health class at Baker middle school also includes academic intervention and structured relationship building activities

\*\*Homeroom at some schools includes time for structured relationship building

Specific examples help clarify how time is allocated different further. During the 2021-2022 school year, for example, a typical 6<sup>th</sup> grade student at the Lincoln school spent 59% of their day in core instruction, while a typical 8<sup>th</sup> grader at the same school spent 50% of their day in core instruction.



**Figure 1.6 Percent of Annual Time Devoted to Categories of Time - Lincoln School  
SY21-22**

| Category                         | 6 <sup>th</sup> Grade | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
|----------------------------------|-----------------------|-----------------------|-----------------------|
| Core Instruction                 | 59%                   | 50%                   | 50%                   |
| Non-Core Instruction             | 21%                   | 30%                   | 31%                   |
| Non-Instructional Time           | 16%                   | 16%                   | 16%                   |
| Academic Intervention            | 3%                    | 3%                    | 3%                    |
| Structured Relationship Building | 1%                    | 1%                    | 1%                    |

The difference of nine percent equates to 6,408 minutes over the course of the school year, or approximately 142 class periods (of 45-minute length). In this particular example, the difference was driven by an additional writing period every day for all 6<sup>th</sup> graders at Lincoln.

Similarly, while a typical 7<sup>th</sup> grader at the Pierce school spent 47% of their day on core instruction, a typical 7<sup>th</sup> grader at the Lawrence school spent 51% of their day on core instruction.

**Figure 1.7 Percent of Annual Time Devoted to Categories of Time for a Typical 7<sup>th</sup> Grader at Pierce and Lawrence  
SY21-22**

| Category                         | Sample Pierce<br>7 <sup>th</sup> Grader | Sample Lawrence<br>7 <sup>th</sup> Grader |
|----------------------------------|-----------------------------------------|-------------------------------------------|
| Core Instruction                 | 47%                                     | 51%                                       |
| Non-Core Instruction             | 26%                                     | 30%                                       |
| Non-Instructional Time           | 19%                                     | 14%                                       |
| Academic Intervention            | 7%                                      | 3%                                        |
| Structured Relationship Building | 0%                                      | 3%                                        |

The difference of four percent for core instruction between the two school equates to ~2,700 minutes over the course of the school year, or ~60 class periods (of 45-minute length).

Program requirements for non-core classes also vary between the 6<sup>th</sup> grade and 7<sup>th</sup> and 8<sup>th</sup> grade in the district, which leads to differences in how time is allocated across grades.

**Figure 1.8 Sample 6<sup>th</sup> Grade versus 7<sup>th</sup>/8<sup>th</sup> grade Non-Core Classes and Programming  
SY21-22**

| Subject                                             | 6 <sup>th</sup> Grade | 7 <sup>th</sup> /8 <sup>th</sup> Grade |
|-----------------------------------------------------|-----------------------|----------------------------------------|
| Art                                                 | 1x/week               | 1x/week                                |
| PE                                                  | 2x/week               | 2x/week                                |
| Health                                              | -                     | 2x/week                                |
| Conservatory                                        | 2x/week               | 2x/week                                |
| World Language                                      | 3x/week               | 5x/week                                |
| <b>Total Frequency of Non-Core Classes per Week</b> | <b>8x</b>             | <b>12x</b>                             |

Compared to a student in 7<sup>th</sup> or 8<sup>th</sup> grade, a student in 6<sup>th</sup> grade in the district has four extra “gaps” in their schedule due to not taking health class and world language less frequently. How these open periods for 6<sup>th</sup> graders are filled vary by school and may include additional WIN periods, advisory periods, tutorial periods, STEAM classes, and/or writing classes. Interviews with school and district leaders made it clear, however, that existing variation in how time is allocated is more often the result of “trying to make everything fit into the schedule” rather than coordinated programmatic or curricular decisions. As one school leader noted, “There is a need to make things more equitable. There are eight different middle school models across the district for how we assign time for things like WIN, advisory, and other blocks of time.”

**1b. The difference in how time is allocated across schools is driven partially by differing academic period lengths (e.g., 45 min vs 60 min), which in most cases is not connected to an explicit strategy or vision for learning.**

A significant driver behind the variation in how time is spent across middle schools is the length of academic periods, which varies between schools and grade levels. As figure 1.9 illustrates below, core academic period lengths range between ~42-90 minutes at the middle schools, with most schools having multiple academic period lengths.

**Figure 1.9 Comparison of Core Academic Period Lengths and Frequency Across Brookline Middle Schools SY21-22**

| School                       | Estimated # of Different Core Period Lengths | Simplified Range of Core Period Lengths                            | Standard Core Period Frequency |
|------------------------------|----------------------------------------------|--------------------------------------------------------------------|--------------------------------|
| Amos A. Lawrence School      | 3                                            | 55 min<br>60 min<br>65 min                                         | 4x/week                        |
| Edith C. Baker School        | 2                                            | 48 min<br>59 min                                                   | 4x/week                        |
| Florida Ruffin Ridley School | 4                                            | 45 min<br>50 min<br>55 min<br>60 min                               | 4x/week                        |
| Heath School                 | 5                                            | 45 min<br>50 min<br>90 min (science only)<br>95 min (science only) | 5x/week<br>(science 4x/week)   |
| John D. Runkle School        | 3                                            | 43 min<br>45 min<br>48 min                                         | 5x/week                        |
| John Pierce School           | 1                                            | 45 min                                                             | 5x/week                        |
| Michael F. Driscoll School   | 5                                            | 45 min<br>46 min<br>47 min<br>48 min<br>50 min                     | 5x/week                        |
| William H. Lincoln School    | 3                                            | 42 min<br>47 min<br>52 min                                         | 5x/week                        |

Three schools in the district (Lawrence, Baker, Ridley) run ~60-minute periods for core classes 4x/week. Five schools (Heath, Runkle, Pierce, Driscoll, Lincoln) run ~45-minute periods for core classes 5x/week. Many

teachers and staff shared the perspective that a period length of ~45 minutes feels short, while many others noted the value in seeing students every day:

### ***Length of Period***

- “45 minutes is too short, you get rushed. You get in the groove and then we have to say goodbye. It feels rushed, especially as a science teacher with set up, clean up, etc.”
- “Having inconsistent block lengths is challenging—on some days there are 1-hour long classes, other times 50 minutes.”
- “I like that all classes are the same amount of time. In previous years, the morning classes were longer than the afternoon classes.”
- “If I had a magic wand, I would get rid of something to have longer classes, especially in English.”
- “One of the most significant challenges with the current schedule is the 50-minute blocks on Mondays, it makes planning for the rest of the week challenging. I would like periods of the same length.”

### ***Frequency of Classes***

- “If we could somehow have longer blocks but still see students every day that would be ideal, because they do forget things if it’s not every day.”
- “I would like to see all students every day, but for more than 50 minutes.”
- “The number of sections you see in a day feels more manageable and reasonable at FRR than doing five academic classes in one day.”
- “If I had a magic wand, I would have math every day, five times a week for each class.”

An additional implication of varying period lengths is the resulting differences in teacher workload and number of planning periods. (This is discussed in more detail in section 4.1 on page 35.)

When asked via survey about the length of class periods and number of classes taken in a given day, students who attended schools with core academic periods four times a week for ~60 minutes periods were generally more satisfied with their class length and frequency compared to students at schools with core academic periods five times a week for ~45-minute periods.

**Figure 1.10 Current Middle School Student Survey Results – Class Period Length and Frequency**  
**SY22-23**

| <b>School</b>                                                   | <b>Total # of Survey Respondents</b> | <b><i>“The length of my class period is...” - % of students responding “just right”</i></b> | <b><i>“The number of classes I take each day is...” - % of students responding “just right”</i></b> |
|-----------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Amos A. Lawrence School                                         | 39                                   | 82%                                                                                         | 90%                                                                                                 |
| Edith C. Baker School                                           | 39                                   | 82%                                                                                         | 79%                                                                                                 |
| John Pierce School                                              | 115                                  | 80%                                                                                         | 77%                                                                                                 |
| Florida Ruffin Ridley School                                    | 157                                  | 75%                                                                                         | 89%                                                                                                 |
| William H. Lincoln School                                       | 8                                    | 75%                                                                                         | 63%                                                                                                 |
| Heath School                                                    | 63                                   | 68%                                                                                         | 68%                                                                                                 |
| John D. Runkle School                                           | 62                                   | 63%                                                                                         | 68%                                                                                                 |
| Michael Driscoll School                                         | 85                                   | 60%                                                                                         | 58%                                                                                                 |
| Schools with Core Period Frequency of 4x/week (~60 min periods) | 235                                  | 77%                                                                                         | 88%                                                                                                 |
| Schools with Core Period Frequency of 5x/week (~45 min periods) | 333                                  | 69%                                                                                         | 68%                                                                                                 |
| <b>District Total</b>                                           | <b>568</b>                           | <b>73%</b>                                                                                  | <b>76%</b>                                                                                          |

**1c. The amount of annual time on learning a student receives in a given subject can vary considerably between schools and across grade levels in the same school.**

Due to varying period lengths and frequencies, the amount of time a student receives in a core subject can vary both by school as well as grade level. As an example, the amount of time a student spends in 6<sup>th</sup> grade math across the eight schools ranges between 135 – 163 hours annually, as outlined in figure 1.11 below.

**Figure 1.11 Annual Time on Instruction – 6<sup>th</sup> Grade Math  
SY21-22**

| School                   | Weekly Frequency of 6 <sup>th</sup> Grade Math<br>Period by Period Length (min) | Total Annual<br>Instructional Time (hrs) |
|--------------------------|---------------------------------------------------------------------------------|------------------------------------------|
| Baker School             | 46 – 1x<br>58 – 3x                                                              | 135                                      |
| John Pierce School       | 45 – 5x                                                                         | 135                                      |
| Heath School             | 45 – 4x<br>50 – 1x                                                              | 138                                      |
| John D. Runkle           | 43 – 1x<br>45 – 1x<br>48 – 3x                                                   | 139                                      |
| Amos A. Lawrence         | 60 – 4x                                                                         | 144                                      |
| William H. Lincoln       | 50 – 3x<br>55 – 2x                                                              | 147                                      |
| Florida Ruffin<br>Ridley | 50 – 1x<br>55 – 3x                                                              | 156                                      |
| Driscoll School          | 44 – 1x<br>45 – 3x<br>46 – 1x<br>47 – 1x                                        | 163                                      |

- The difference between the school with the least 6th grade math hours (135) and the most (163) is 28 hours, or approximately 20 percent. This is the equivalent of ~37 days (assuming 45-minute periods) of instruction per year.

As figure 1.12 outlines below, the range of annual instructional time between schools is greater in ELA than it is in math.

**Figure 1.12 Range of Annual Time Spent on ELA and Math Instruction Across Brookline Middle Schools SY21-22**

| ELA                   |                        |                       |                       | MATH                  |                       |                       |                       |
|-----------------------|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| School                | 6 <sup>th</sup> Grade  | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade | School                | 6 <sup>th</sup> Grade | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
| Heath School          | 135                    | 141                   | 135                   | Baker School          | 135                   | 135                   | 135                   |
| John Pierce School    | 135                    | 135                   | 135                   | John Pierce School    | 135                   | 135                   | 135                   |
| John D. Runkle        | 144                    | 142                   | 144                   | Heath School          | 138                   | 138                   | 135                   |
| Amos A. Lawrence      | 147                    | 144                   | 144                   | John D. Runkle        | 139                   | 144                   | 144                   |
| Baker School          | 189                    | 135                   | 162                   | Amos A. Lawrence      | 144                   | 144                   | 144                   |
| Driscoll School       | 195                    | 177                   | 160                   | William H. Lincoln    | 147                   | 147                   | 135                   |
| Florida Ruffin Ridley | 246                    | 135                   | 132                   | Florida Ruffin Ridley | 156                   | 135                   | 135                   |
| William H. Lincoln    | 248                    | 147                   | 147                   | Driscoll School       | 163                   | 136                   | 139                   |
| Range                 | 135 – 248<br>(113 hrs) | 135 – 177<br>(42 hrs) | 132 – 162<br>(30 hrs) | Range                 | 135 – 163<br>(28 hrs) | 135 – 147<br>(12 hrs) | 135 – 144<br>(9 hrs)  |

Many teachers and staff noted that the differences in instructional time across schools and subjects create challenges related to collaborating with peer teachers and adjusting curriculum to different period lengths:

- “In math, I feel like our curriculum was built to see our students every day. We don’t get to do that. I really like the curriculum, but it doesn’t work out perfectly.”
- “I think there are massive discrepancies in schedules across different schools. It makes it hard to plan with other staff, especially when we teach different amounts of time.”
- “Students do not have enough time in ELA. They only have 3.75 hours a week. That seems low considering there are so many literacy standards and it’s an MCAS subject.”
- “Parents and high school teachers are making comments about the lack of spelling/grammar preparation, poor writing skills, inability to read grade level texts, etc. There is a lot of pressure on ELA teachers but not enough time.”

#### **1d. Variation in amount of learning time and middle school experience provides students with perceived different levels of preparation for high school.**

Many stakeholders noted the perception that students are prepared differently for high school depending on the middle school they attend. As one district administrator shared, “I shouldn’t be able to walk into 9<sup>th</sup> grade and pick out where student went to middle school based on student performance.” While student academic performance data was not examined as part of this study, a survey of current Brookline High School students was conducted to ask them to reflect on their middle school experience.

Students reported varying levels of preparedness for high school depending on the middle school they attended in the district. Overall, of the ~200 current high school students that completed the survey, approximately half either agreed or strongly agreed that their middle school prepared them well for high school.

**Figure 1.13 Current High School Student Survey Results – High School Preparedness  
SY22-23**

| <b>School</b>                | <b># of Student Alumni that Completed Survey</b> | <b><i>“My middle school prepared me well for high school” - % of students that agreed or strongly agreed</i></b> |
|------------------------------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| William H. Lincoln School    | 16                                               | 69%                                                                                                              |
| Florida Ruffin Ridley School | 30                                               | 67%                                                                                                              |
| John D. Runkle School        | 27                                               | 63%                                                                                                              |
| John Pierce School           | 39                                               | 56%                                                                                                              |
| Amos A. Lawrence School      | 19                                               | 47%                                                                                                              |
| Heath School                 | 25                                               | 44%                                                                                                              |
| Michael Driscoll School      | 23                                               | 39%                                                                                                              |
| Edith C. Baker School        | 23                                               | 36%                                                                                                              |
| <b>District Total</b>        | <b>202</b>                                       | <b>53%</b>                                                                                                       |



## Finding 2: The middle schools do not universally provide best practice academic intervention or acceleration to students.

**2a. While nearly all schools offer a “What I Need” (WIN) block, the duration and frequency of this block differs by school and grade level, and the use of the block is not consistently aligned to best practice.**

Not all students learn at the same pace, and many require extra time to learn and master material. Other students quickly become proficient and need to be challenged beyond grade level instruction. To help address these realities, all middle schools were required by the district to incorporate a “What I Need” (WIN) block into their schedule. The purpose of this time was to create a time during the day in which students could receive extra support, academic enrichment, or help with homework, among other activities.

Both the frequency and duration of this block varies across the district’s middle schools. As figure 2.1 details, students had access to a WIN block anywhere between 1-3x/week during the 2021-2022 school year depending on the grade level and school they attended.

**Figure 2.1 Estimated Frequency of WIN Block per Week at Brookline Middle Schools SY21-22**

| School                       | Estimated Frequency of WIN per Week |                       |                       |
|------------------------------|-------------------------------------|-----------------------|-----------------------|
|                              | 6 <sup>th</sup> Grade               | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
| Amos A. Lawrence School      | 3                                   | 1                     | 1                     |
| Edith C. Baker School*       | 2                                   | 2                     | 2                     |
| Florida Ruffin Ridley School | 3                                   | 3                     | 3                     |
| Heath School                 | 3                                   | 3                     | 3                     |
| John D. Runkle School        | 3                                   | 1                     | 1                     |
| John Pierce School           | 3                                   | 3                     | 3                     |
| Michael F. Driscoll School   | 2                                   | 1                     | 1                     |
| William H. Lincoln School    | 2                                   | 2                     | 2                     |

*\*Time for academic intervention (similar to WIN block) provided ~2x/week as part of school’s modified health class and/or advisory*

As noted in section 1b., the length of periods varies across schools. This results in varying amount of time devoted to WIN block on an annual basis for students. As figure 2.2 details, students with WIN block built into their schedule have between 28 – 90 hours devoted to WIN on an annual basis, which represents a ~3x difference from the school and grade with the least amount of time devoted to WIN and the school and grade with the most amount of time devoted to WIN.

**Figure 2.2 Annual Time Spent on WIN Block at Brookline Middle Schools  
SY22-23**

| School                       | Estimated Annual WIN Time (hrs) |                       |                       |
|------------------------------|---------------------------------|-----------------------|-----------------------|
|                              | 6 <sup>th</sup> Grade           | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
| Amos A. Lawrence School      | 90                              | 33                    | 33                    |
| Edith C. Baker School*       | 43                              | 43                    | 44                    |
| Florida Ruffin Ridley School | 78                              | 78                    | 78                    |
| Heath School                 | 78                              | 78                    | 78                    |
| John D. Runkle School        | 85                              | 29                    | 29                    |
| John Pierce School           | 135                             | 81                    | 81                    |
| Michael F. Driscoll School   | 54                              | 28                    | 28                    |
| William H. Lincoln School    | 30                              | 30                    | 30                    |

Many teachers, students, and staff explained that the WIN block is most often used as a study hall-like period for most students, though the exact use of the time varies by school. Students with specific learning needs can receive support from academic interventionists, special education teachers, or EL teachers during this time. Representative quotes from stakeholders include:

- “WIN block is basically an unstructured study hall.”
- “WIN block is important so students can go learning center, receive speech therapy, see clinical staff, visit teachers for clarifications, make up tests, those types of things. While I don’t love managing WIN block, it is positive.”
- “We have three WIN blocks per week. They are like study halls and the students who need it, receive learning center during that time. WIN is critical and impactful. For students who don’t receive learning center, it would be great if there was a RTI component, more structure and more targeted practice for students who don’t have learning center minutes.”
- “The model for WIN as an intervention is not realistic. It’s more like an extra help. Even if we were all scheduled to support at the same time, at best, it would be time to get extra help. I wouldn’t be able to provide actual intervention. It’s like in-school office hours while also managing a group of students in your room.”

Nearly three quarters of current middle school students shared via survey that they usually spend the majority of time in a typical WIN block completing homework. Four percent of students shared they work with a teacher to get extra the majority of the time, while only two percent of students noted that they receive services related to their specific needs the majority of the time.

**Figure 2.3 Current Middle School Student Survey Results – WIN Block Use of Time**  
**SY22-23**

| <b>Student Activity</b>                                                                                                                                 | <b><i>“How do you usually spend the majority of your time in a typical WIN block?” - % of students that responded by activity</i></b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Completing homework                                                                                                                                     | 76%                                                                                                                                   |
| Other activities                                                                                                                                        | 6%                                                                                                                                    |
| Reading a book                                                                                                                                          | 5%                                                                                                                                    |
| Working with a teacher to get extra help or catch up                                                                                                    | 4%                                                                                                                                    |
| Talking with friends                                                                                                                                    | 4%                                                                                                                                    |
| Engaging in some type of enrichment activity                                                                                                            | 3%                                                                                                                                    |
| Receiving services related to my specific needs (e.g., support from a special education teacher, support from an ESL teacher, counseling support, etc.) | 2%                                                                                                                                    |

Many stakeholders shared that, while the creation of WIN block is very well-intentioned, the period is often not well used, especially for students who do not require additional academic support. For students that do need additional academic support, it is one of (if not the only) times of the day they can receive support from interventionists, special educators, or English Learner teachers without being pulled from other instruction. Representative quotes from stakeholders include:

- “The WIN period is a great idea, but execution varies a lot across the district.”
- “We have WIN blocks scheduled; they are currently used as study halls for students who don't receive services as part of an ed plan (as opposed to targeted intervention for all students). The result is that we have a block of time being used pretty inefficiently 3x a week.”
- “If I had a magic wand, I would create time for actual intervention for both ELA and math. An intervention more than just one or two times per week.”
- “I’m not actually sure if WIN block is required. Some schools use it more as a filler.”

When asked via survey, over 84 percent of middle school students shared that they find WIN block helpful while 82 percent shared WIN block is a good use of their time.

**Figure 2.4 Current Middle School Student Survey Results – WIN Block Opinions  
SY22-23**

| <b>Group</b>                             | <b><i>“WIN block is helpful” - % of students that agreed or strongly agreed</i></b> | <b><i>“WIN block is a good use of my time” - % of students that agreed or strongly agreed</i></b> |
|------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Current Brookline Middle School Students | 84%                                                                                 | 82%                                                                                               |

When asked to share their rationale as to why WIN block is helpful or a good use of time, many students highlighted the ability to complete homework. Representative quotes from students include:

- “I really like WIN because I get to finish most of my work in school instead of bringing it home. It's also REALLY useful if I need to talk to a teacher about some work I don't understand. I also get to help my friends with work and reading at the beginning.”
- “I really like WIN because I have a lot of extracurriculars after school so WIN is a good way for me to get some of my homework done so I have less when I get home.”
- “I think that WIN block is a great time to either catch up with teachers, get work done, or more. However, sometimes, when you finish, there is nothing to do and it seems unproductive.”
- “WIN gives me time to do my homework and get things done. This is super helpful because this means that after school, I can do things with my friends instead of doing homework.”

## **2b. Very few, if any, content-specific academic intervention courses are available to students at the middle school level struggling in math or literacy.**

Beyond WIN block (or equivalent programming), middle schools in the district offer very few if any content-specific intervention courses for students with designated need. Extra help at some schools is provided after school during teacher office hours, though many stakeholders noted this limits access certain students from attending, such as those with after school programming and/or transition requirements (e.g., students in METCO program, students enrolled in athletics outside of school, etc.)

Many stakeholders highlighted the need for the district to move beyond offering time for general academic support via WIN and instead create content-specific academic interventions in math and literacy to address student needs more effectively. Representative quotes from stakeholders include:

- “There is not enough literacy support in grades 6-8. We have 3 literacy specialists and 1 ELA coach at our school and combined they only work with one 7th grader. They primarily work with younger grades.”
- “RTI is offered regularly in the younger grades. There is hardly any RTI in the upper grades, with the exception of a few students getting Leveled Literacy Intervention (LLI). We need to add intervention blocks for tier 2 & 3 services in grade 6-8—we don’t have any time.”
- “If I had a magic wand, I would create dedicated time in the school day for intensive, planned intervention by skilled teachers.”

- “Remove the requirement for world language and conservatory to make more room for intervention, academic support, and developmental learning, and other electives.”

### Finding 3: The district values and is thoughtful about supporting the social-emotional needs of middle level learners, but under-invests in best practices to build student engagement and agency.

#### 3a. While an advisory period is offered at all middle schools, the duration and frequency vary by school and grade and is not consistently aligned to best practice.

The district reportedly began including advisory programming at all middle schools in 2005. Advisory programming has since evolved independently at each school, with some schools offering advisory just at the 6<sup>th</sup> grade, while others offer it grades 6-8. As one district leader noted, “while the high school has a defined advisory ‘lead,’ the middle school is more of the wild west.” Other stakeholders noted that the purpose of advisory and guidance provided to teachers for how to use the time is not always clear.

- “There was no directive on how to use that time – teachers create their own curriculum by grade level for advisory. Not clear what teachers are supposed to do and there was no training.”
- “District says ‘we trust you to do whatever you want to do with advisory’ but it’s because the district doesn’t know what they want them to do. And technically teachers can’t be asked to plan advisory because it doesn’t meet contract requirements.”
- “In terms of advisory, many of us were trained by advisory, prescribed, certain amount of minutes. Now that’s down to 20 minutes per week at some schools.”

As outlined in figure 3.1 below, advisory happens most frequently in 6<sup>th</sup> grade at the middle school level. This is primarily due to the fact that 6<sup>th</sup> graders take world language 3x/week instead of 5x/week like 7<sup>th</sup> and 8<sup>th</sup> graders. Advisory is used at many middle schools to help “fill” the resulting open blocks of time in 6<sup>th</sup> grader schedules.

**Figure 3.1 Estimated Frequency of Advisory per Week for Brookline Middle Schools SY21-22**

| School                       | Estimated Frequency of Advisory per Week |                       |                       |
|------------------------------|------------------------------------------|-----------------------|-----------------------|
|                              | 6 <sup>th</sup> Grade                    | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
| Amos A. Lawrence School      | 2                                        | 2                     | 1                     |
| Edith C. Baker School*       | 2                                        | 2                     | 2                     |
| Florida Ruffin Ridley School | 4                                        | 4                     | 4                     |
| Heath School                 | 4                                        | -                     | -                     |
| John D. Runkle School        | 2                                        | 1                     | 1                     |
| John Pierce School**         | 1                                        | -                     | -                     |
| Michael F. Driscoll School   | 1                                        | -                     | -                     |
| William H. Lincoln School    | -                                        | -                     | -                     |

\*Health class at Baker also time for advisory ~2x/week

\*\*Extended homeroom period in 6<sup>th</sup> grade at Pierce is used similar to an advisory

During school year 2021-2022, schools that ran an advisory period used a variety of seven different period lengths, ranging between 25-59 minutes. Due to differences in both frequency and duration of advisory programming, the annual amount of time devoted to advisory (as outlined in figure 3.2 below) varied considerably across the district.

**Figure 3.2 Estimated Annual Advisory Time for Brookline Middle Schools SY21-22**

| School                       | Estimated Annual Advisory Time (hrs) |                       |                       |
|------------------------------|--------------------------------------|-----------------------|-----------------------|
|                              | 6 <sup>th</sup> Grade                | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
| Amos A. Lawrence School      | 48                                   | 36                    | 18                    |
| Edith C. Baker School        | 43                                   | 43                    | 43                    |
| Florida Ruffin Ridley School | 72                                   | 72                    | 72                    |
| Heath School                 | 111                                  | -                     | -                     |
| John D. Runkle School        | 512                                  | 29                    | 29                    |
| John Pierce School           | 27                                   | -                     | -                     |
| Michael F. Driscoll School   | 26                                   | -                     | -                     |
| William H. Lincoln School    | -                                    | -                     | -                     |

Opinions on the overall utility of advisory varied among teachers and students. Many teachers at schools with limited advisory programming expressed interest in expanding advisory programming to run all middle school grades.

- “6<sup>th</sup> grade advisory is really helpful. It’s beneficial as students transition from 5<sup>th</sup> to 6<sup>th</sup> grade. We meet 4 x/week and address issues, have restorative circles, problem solve.”
- “Advisory for all! 7<sup>th</sup> and 8<sup>th</sup> graders miss it, and I think the 7/8 teaching team miss it, too.”
- “It’s not fair that only 6<sup>th</sup> graders get advisory. Advisory is really fun and you get to do homework, it’s not fair for 7<sup>th</sup> and 8<sup>th</sup> graders who don’t have it.”

Many students, however, shared that existing advisory programming is not always well organized and a good use of their time.

- “It seems like advisory is a holding spot for time.”
- “It would be nice if advisory was more structured and there was more oversight from the district.”
- “We have advisory twice a week, but it’s pretty disorganized. I would rather have more health; the time could be used for something a lot better.”

When asked about advisory via survey, ~52% of current middle school students noted that the period is helpful and ~50% noted that the period is a good use of time.

**Figure 3.3 Current Middle Student Survey Results – Advisory Opinions  
SY22-23**

| <b>Group</b>                                   | <b><i>“Advisory is helpful”<br/>- % of students that<br/>agreed or strongly<br/>agreed</i></b> | <b><i>“Advisory is a good use<br/>of my time” - % of<br/>students that agreed or<br/>strongly agreed</i></b> |
|------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Current Brookline<br>Middle School<br>Students | 52%                                                                                            | 50%                                                                                                          |

When asked in the survey about the typical activities done during extended advisory, the top three activities students highlighted were 1) team building activities or games; 2) other activities; and 3) class discussions on relevant topics. This suggests that advisory programming is often used with good intent and for structured relationship building, though the activities completed during that time may not always been productive and well-received by students.

**Figure 3.4 Current Middle School Student Survey Results – Advisory Use of Time  
SY22-23**

| <b>Student Activity</b>                                                                                                                                 | <b><i>“How do you usually spend the<br/>majority of your time in a typical<br/>advisory block?” - % of students<br/>that responded by activity</i></b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Team building activities or games                                                                                                                       | 33%                                                                                                                                                    |
| Other activities                                                                                                                                        | 19%                                                                                                                                                    |
| Class discussions on relevant topics (e.g., current news, being a teenager, etc.)                                                                       | 15%                                                                                                                                                    |
| Completing homework                                                                                                                                     | 15%                                                                                                                                                    |
| Talking with friends                                                                                                                                    | 12%                                                                                                                                                    |
| Reading a book                                                                                                                                          | 3%                                                                                                                                                     |
| Following activities from a SEL curriculum (e.g., Second Step)                                                                                          | 2%                                                                                                                                                     |
| Receiving services related to my specific needs (e.g., support from a special education teacher, support from an ESL teacher, counseling support, etc.) | 1%                                                                                                                                                     |
| Working with a teacher to get extra help or catch up                                                                                                    | <1%                                                                                                                                                    |



### 3b. Middle school students have consistent and nearly identical access to classes in art, music (conservatory), physical education, health, and world language, regardless of interest or prior experience.

As noted in figure 1.3 on page 14, students at the middle school level in the district take an identical set of non-core courses. These include:

- Visual arts 1x/week
- PE 2x/week
- Music (conservatory) 2x/week
- Health 2x/week (7<sup>th</sup> and 8<sup>th</sup> only)
- World language 3x/week (6<sup>th</sup> grade) or 5x/week (7<sup>th</sup> and 8<sup>th</sup> grade)

The middle schools currently do not provide “elective” classes that students can elect to take based on interest or preference outside of world language and conservatory. Student choice over classes they take is limited selecting world language and music (conservatory) classes, as noted below.

**World Language Choice:** All students begin taking Spanish in elementary school in the district. Beginning in 6<sup>th</sup> grade, students can choose the world language they take. At most schools, students can choose between Spanish and French. Students at Pierce and Driscoll can choose between Spanish and Mandarin Chinese. Students are required to take a world language all three years of middle school.

**Conservatory Choice:** Similarly, all students begin taking music in elementary school. Beginning in 6<sup>th</sup> grade, students can choose from a set of six conservatory music class they would like to take. Options include:

- Band
- Chorus
- Orchestra
- Guitar / Ukulele
- Music Exploration
- Music Production

Students are required to take a conservatory class all three years of middle school.

Many stakeholders expressed concern and frustration regarding the perceived relative limited amount of voice and choice students have regarding the classes they take. Some stakeholders noted that current middle school schedules do not offer opportunity for students to pursue what interests them most, while others shared frustration that the middle schools offer a perceived limited set of options for students relative to the extensive set of courses available to students at Brookline High School. Others shared that the middle schools already try to cram too much programming into the schedule.

- “Add a civics class. Please. The social justice tilt in social studies, while admirable, also means that kids are getting a slanted view of history.”
- “We actually do not have a lot of student choice for as ‘loosey goosey’ as we are with standards.”

- “We offer very limited choice outside of choosing a world language in 6<sup>th</sup> grade and some choice within the music program. Compared to what we offer at the high school, it’s wild we don’t offer more choice at the middle school.”
- “The average middle school student receives 2x as much music as they do art, whether they like it or not.”
- “We either need to lengthen the school day or stop trying to do so much.”

When asked via survey about the frequency of non-core courses, over half of students shared the opinion that art does not happen often enough at the middle school. Nearly half of students noted that world language happens too often, while approximately two-thirds of students said that music (conservatory) happens the right amount of time.

**Figure 3.5 Current Middle School Student Survey Results – World Language, Art, Music (Conservatory) SY22-23**

| <b>Student Response</b> | <b><i>“The school schedule offers world language 3x/week (6<sup>th</sup> grade) or 5x/week (7<sup>th</sup>/8<sup>th</sup> grade). This amount of time for world language is:”</i></b> | <b><i>“The school schedule offers art 1x/week. This amount of time for art is:”</i></b> | <b><i>“The school offers music/conservatory 2x/week. This amount of time is:”</i></b> |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Too much                | 46%                                                                                                                                                                                   | 9%                                                                                      | 26%                                                                                   |
| Just right              | 51%                                                                                                                                                                                   | 37%                                                                                     | 65%                                                                                   |
| Not enough              | 3%                                                                                                                                                                                    | 54%                                                                                     | 9%                                                                                    |

When asked via survey about other classes they would like to take, students shared many topics currently outside of non-core offerings. A list of the top 10 submissions shared by students is detailed in figure 3.6 below.

**Figure 3.6 Current Middle School Student Survey Results – Top Mentions of Potential Classes SY22-23**

| <b><i>“I really wish my school offered classes in...” – Top 10 Subjects Submitted by Students</i></b> | <b>Student Mentions in Survey</b> |
|-------------------------------------------------------------------------------------------------------|-----------------------------------|
| Cooking                                                                                               | 47                                |
| Theater                                                                                               | 22                                |
| Life skills                                                                                           | 20                                |
| Home economics                                                                                        | 19                                |
| Computer science                                                                                      | 18                                |
| Financial literacy                                                                                    | 18                                |
| Art                                                                                                   | 17                                |
| Coding                                                                                                | 16                                |
| Baking                                                                                                | 15                                |
| Relationship building                                                                                 | 15                                |

*\*Complete list of subjects noted by students in the appendix*

### 3c. Many students and families shared a perceived lack of afterschool clubs and activities for students to engage in.

In focus groups, many stakeholders noted a perceived lack of afterschool clubs and activities for students. Multiple stakeholders shared the perception that afterschool opportunities for students were much more robust prior to the pandemic and have not returned to pre-pandemic levels. Representative quotes from stakeholders include:

- “There is a distinct lack of extra-curricular programming since COVID happened.”
- “We used to have an official after school clubs system that the school organized. We should bring back after school clubs.”
- “I do think there could be more clubs at middle school. My son got to high school and there is an explosion of amazing opportunities they have. I wish they could have 1/16 that in middle school.”
- “Kids are begging for more clubs, activities, sports, especially across grade levels.”

**Finding 4: There is no universal expectation or definition of what constitutes a “full” workload for middle school classroom teachers, which results in uneven use of teacher time and talent.**

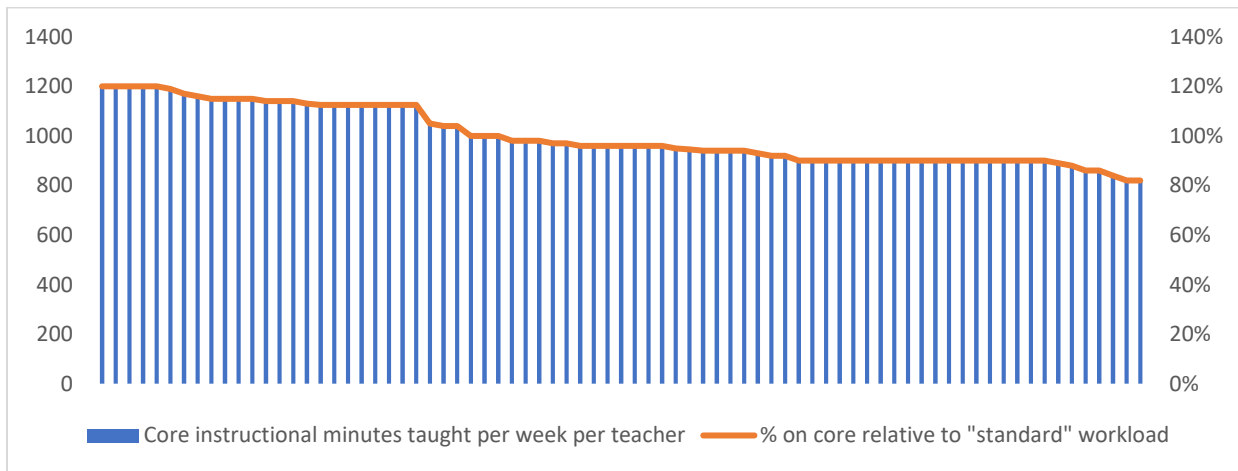
**4a. The amount of time core teachers spend delivering instruction in their subject in a given week varies across and within schools.**

According to article 4.3 of the [memorandum of agreement](#) between the Brookline school committee and the Brookline educators union signed on May 17<sup>th</sup>, 2022, teachers in 6<sup>th</sup> – 8<sup>th</sup> grade must have one unassigned period of 40 minutes per day and one half hour duty-free lunch period per day. The memorandum of agreement does not specify any additional requirements as it relates to a middle school teacher’s instructional workload (e.g., number of classes taught per day, maximum number of instructional minutes per day, etc.)

Without additional definition of what constitutes an “average” teacher workload beyond a daily prep period and duty-free lunch, an “average” teacher workload of 1,000 instructional minutes per week on core instruction was established to assess and compare the instructional workload of core content (math, science, ELA, and social studies) teachers. This figure is the approximate mathematical average<sup>1</sup> of the amount of time all core subject teachers across all schools spend on core instruction in a typical week. This figure is *not* based on any contractual requirement or district definition of what constitutes a full-time employee and is meant to be used solely for the purpose of this report to benchmark teacher workload across schools. There is a total of 1,900 minutes in the school day on a weekly basis at all middle schools and at all grade levels.

Figure 4.1 below illustrates the total time core teachers in the district spend per week providing core instruction. The blue bars represent the total number of minutes individual core teachers spend per week providing core instruction. The orange line represents teachers’ percent of time providing core instruction relative to the “average” workload of 1,000 minutes per week.

**Figure 4.1 Individual Core Teacher Instructional Minutes per Week  
SY21-22**



- The total weekly minutes spent on core instruction by middle school core subject teachers ranges between 770 – 1200 minutes, which represents a ~56 percent difference. Annually, this equates to a difference of ~258 hours in instructional time between the teachers with the least and the most time on instruction.
- Relative to the “average” workload of 1,000 minutes, the range of time spent on core instruction by middle school core subject teachers ranges between 77 – 120 percent.

Figure 4.2 details the average amount of time spent on core instruction by subjects taught across the district’s eight middle schools.

**Figure 4.2 Average Core Instructional Minutes Taught by Subject  
SY21-22**

| Subject(s) Taught        | Average core instructional minutes taught per week per teacher | % on core relative to "average" workload | # of teachers |
|--------------------------|----------------------------------------------------------------|------------------------------------------|---------------|
| Math + Science           | 1200                                                           | 120%                                     | 1             |
| Math                     | 1014                                                           | 101%                                     | 18            |
| English + Social Studies | 999                                                            | 100%                                     | 4             |
| Social Studies           | 996                                                            | 100%                                     | 17            |
| Math + Social Studies    | 996                                                            | 100%                                     | 1             |
| Science + Social Studies | 996                                                            | 100%                                     | 1             |
| Science                  | 986                                                            | 99%                                      | 18            |
| English                  | 956                                                            | 96%                                      | 20            |

- During SY2021-2022, teachers who taught math *or* math and science spent, on average, the most amount of time per week providing core instruction.
- English teachers spent, on average, the least amount of time per week providing core instruction (956 minutes per week).

Finally, figure 4.3 details the average amount of time spent on core instruction by grade levels taught across the district's eight middle schools.

**Figure 4.3 Average Core Instructional Minutes Taught by Grade Level  
SY21-22**

| Grade Level(s) Taught | Average core instructional minutes taught per week per teacher | % on core relative to "average" workload | # of teachers |
|-----------------------|----------------------------------------------------------------|------------------------------------------|---------------|
| 7/8                   | 1117                                                           | 112%                                     | 18            |
| 7                     | 999                                                            | 100%                                     | 15            |
| 8                     | 986                                                            | 99%                                      | 13            |
| 6/7                   | 935                                                            | 94%                                      | 16            |
| 6                     | 910                                                            | 91%                                      | 18            |

- During SY2021-2022, teachers who taught 7<sup>th</sup> and 8<sup>th</sup> grade spent, on average, the most amount of time per week providing core instruction (1117 minutes per week).
- 6<sup>th</sup> grade teachers spent, on average, the least amount of time per week providing core instruction (910 minutes per week).

There are two significant drivers behind this variation in in the amount of time core teachers devote to instruction in a given week: the length of academic periods at the schools and the number of sections in a school. As noted in section in section 1b (page 17), some schools run ~45-minute periods 5x/week while other schools run ~60-minute periods 4x/week. This results in teachers that teach the same subject teaching different number of minutes of core instruction in a given week at different schools. Additionally, as noted in section 1 (page 12), the number of sections in school impacts the number of courses a teacher teaches per week. This results in some teachers teaching four section four times a week and other teachers teaching five sections four times a week.

Core teacher time devoted to other activities outside of core instruction was not included in this analysis. Conversations with school leaders and spot checking of teacher schedules suggest that "extra" time in the schedules of teachers that teach under the "average" workload of 1,000 minutes is filled with either additional WIN or advisory duties or extra planning periods.

Many teachers across the district share frustrations regarding the perceived level of inequity of teaching workloads across schools and grade levels. Some noted differences in the number of preps (i.e., number of different classes taught) as a key challenge while others highlighted differences in number of grade levels and total students taught as points of concern. Representative quotes from stakeholders include:

- "Some teachers have 5x45, some 4x60, some math teachers teach health, some have 4 classes and advisory, some have 55 classes and advisory. It is not clear what full time FTE is and it leads to a lot of inequity."

- “There is entrenched resentment to the inequity of FTE. Teachers are so angry. We don’t have a way of getting to parity.”
- “Some full-time teachers only have 80 students in three sections of the same grade, others prepare lessons for two different grades courses and teach over 100 students. Some teachers only teach three, four, and some five periods. There is no way that students are receiving the same quality of education when some teachers have so much extra time to prepare lessons with more moving parts and provide students more detailed and more frequent feedback on student work.”
- “We don’t have an understanding of what 1.0 FTE staffing is. Is 1.0 determined by the number of preps you teach or someone who has a prep and a lunch and everything else is filled in?”

**4b. Given the district has 8 relatively small middle schools, each with varying enrollment, core teachers at smaller schools in the district inevitably teach more grades and/or subjects than teachers in larger schools.**

Enrollment varies between 148 - 275 students across the district’s middle schools. This variation in enrollment results in a varying number of sections per grade at each school, as outlined in figure 4.4 below.

**Figure 4.4 Student Enrollment and Section Count at Brookline Middle Schools SY21-22**

| School Name                  | Total Enrollment | 6 <sup>th</sup> Grade Sections | 7 <sup>th</sup> Grade Sections | 8 <sup>th</sup> Grade Sections |
|------------------------------|------------------|--------------------------------|--------------------------------|--------------------------------|
| John Pierce School           | 275              | 4                              | 5                              | 5                              |
| Florida Ruffin Ridley School | 260              | 4                              | 4                              | 4                              |
| Edith C. Baker School        | 205              | 4                              | 4                              | 3                              |
| Amos A. Lawrence School      | 189              | 4                              | 3                              | 3                              |
| Heath School                 | 181              | 3                              | 3                              | 3                              |
| John D. Runkle School        | 171              | 3                              | 3                              | 3                              |
| Michael F. Driscoll School   | 167              | 3                              | 3                              | 3                              |
| William H. Lincoln School    | 148              | 3                              | 3                              | 3                              |

This variation in section counts across schools drives how teachers are staffed at each school. For example:

- Most core teacher at a “4 section school” (i.e., a school with primarily 4 sections per grade, such as Ridley) teach 4 sections of the same subject in the same grade, for example 4 sections of 6<sup>th</sup> grade math.
- Most core teachers as a “3 section school” (i.e., a school with primarily 3 sections per grade, such as Lincoln) teach 3 sections of a subject in one grade and 1-2 sections of a subject in a second grade, for example 3 sections of 6<sup>th</sup> grade math and 1 section of 7<sup>th</sup> grade math. Whether a core teacher teaches 4 sections total or 5 sections total varies by department and sometimes by year. There is currently no district-wide rule or practice to determine which core teachers are assigned 4 sections or 5 sections at a “3 section school.”

As outlined in figure 4.5 below, ~50 percent of the core teachers in the district teach one subject in one grade, while ~40 percent of teachers teach one subject over two grades and ~10 percent of teachers teach two subjects in one grade.

**Figure 4.5 Amount of Core Teacher Preps  
SY21-22**

| Core Teacher Preps  | Number of FTE |
|---------------------|---------------|
| 1 subject, 1 grade  | 39            |
| 1 subject, 2 grades | 35            |
| 2 subjects, 1 grade | 6             |

These figures are driven primarily by the need to align staffing to school enrollment and therefore split teachers across grades, though in some limited cases are based on school leader vision and preference.

During focus groups, many teachers shared a preference for specializing in one subject rather than teaching multiple subjects. Representative from stakeholders include:

- “At FRR, each teacher has only one grade and teaches only one subject. This seems optimal for teacher depth of knowledge and student support.”
- “Please keep social studies and science as discrete subjects!”
- “Social studies and science taught as discrete subjects by expert teachers is also a strength at our school.”
- “A magic wand would be used to ensure that a middle school teacher of a particular discipline would never be asked or expected to teach something outside of their discipline. I have to teach a second core class (Health, 4 times a week, 4 lessons a week). That seems like a poor use of my expertise.”

Other teachers noted challenges with “floating” between grades and teaching a fifth section, which increases the total number of students they are responsible for. Representative from stakeholders include:

- “Because 7th grade is divided between grade 6/7 teachers and grade 7/8 teachers, 7th grade ends up with no ‘ownership’ from the teachers. There is little time for communication between these teachers to talk and bond over 7th grade.”
- “I do not want to be drowning in grading essays with too many students.”
- “All teachers within the same department should have a reasonably similar student load and course load. It is also my understanding that Brookline High School English teachers are capped at 4 sections. In any case, 100 students with two preps is not the norm, and it's disheartening to know that I am being stretched so thin when colleagues in the same department a mile away have half the amount of work for the same pay.”



#### 4c. Many world language teachers in the district expressed a high level of frustration regarding current instructional workloads and range of grade levels taught.

The district has made a substantial commitment to world language by requiring all students to begin taking a world language in elementary school and continuing world language 3x/week throughout 6<sup>th</sup> grade and 5x/week throughout 7<sup>th</sup> and 8<sup>th</sup> grade. Many world language teachers in the district teach at both the elementary and middle school level. Limitations with existing district data systems prevented a comprehensive analysis of world language teacher schedules.

During stakeholder engagement sessions, many world language teachers shared the perception that their existing schedules result in inequitable workloads and create limited time for collaboration relative to many of their peer teachers. Others shared that they feel undervalued by the district given challenges created by their schedule. Representative quotes from stakeholders include:

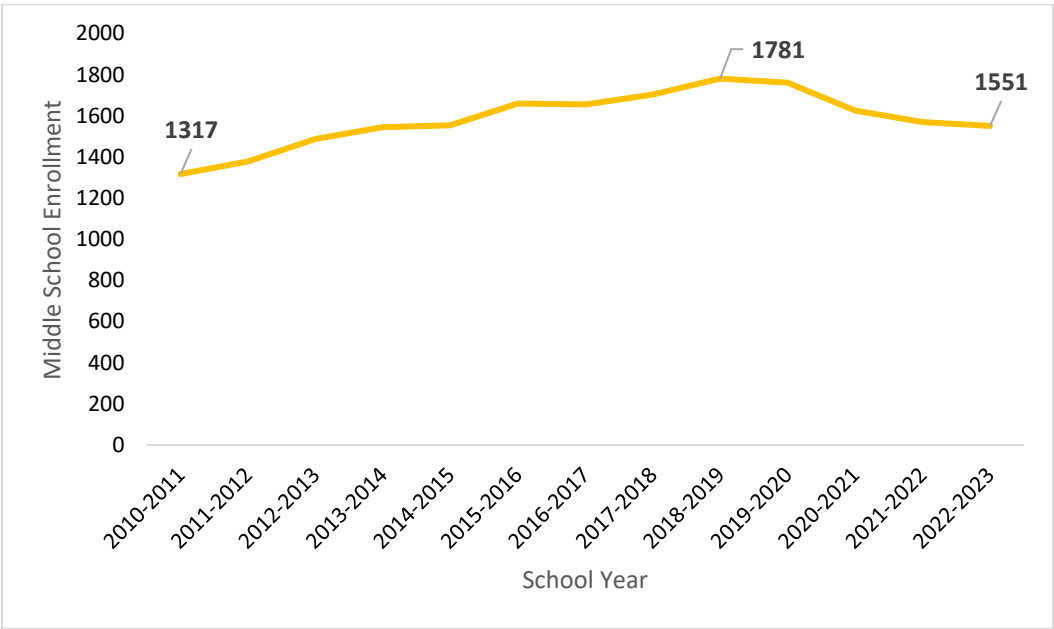
- “The schedule has been designed on our backs so teachers have more time to collaborate and more time to meet. We are excluded from that.”
- “Middle school teachers in most subjects who see their classes every day plan 5-10 different lessons a week (1 or 2 grade levels total). World language teachers typically plan 13-23 unique lessons per week, but are given the same or less time to plan and prep.”
- “Some of us are scheduled for six classes instead of five. Our FTE around the district is variable. The same classes don’t count the same for different teachers. It creates inequality and they are not transparent.”
- “World language teachers have always been ‘less than’ other content teachers, but this has steadily and now dramatically increased. It is degrading, demoralizing, and humiliating how differently we are treated.”
- “In short, our schedules are horrible and we have no teaching space, when our content area needs a space far more than a math or social studies teacher. But we don't count.”

**Finding 5: There is opportunity to staff more closely to enrollment and adjust class sizes to reflect ongoing changes in student enrollment in the district.**

**5a. The district has seen notable shifts in enrollment over the past decade, including growth pre-pandemic, a decline as a result of the pandemic, and a more recent uptick since the pandemic, but staffing hasn’t adjusted as quickly as enrollment shifts.**

Middle school enrollment in the Public Schools of Brookline has shifted over the past decade. As figure 5.1 illustrates, total middle school enrollment increased by 464 students (~35 percent) between SY2011 and SY2019. Like many other public school middle schools in Massachusetts, middle school enrollment decreased as a result of the pandemic that began in spring 2020. Total middle school enrollment decreased by 230 students (~13 percent) between SY2019 and SY2023.

**Figure 5.1 Public Schools of Brookline Middle School (Grades 6-8) Student Enrollment SY2011 – SY2023**



Source: Massachusetts Department of Elementary and Secondary Education

Relative to overall district enrollment, enrollment in middle schools increased at a higher rate in the years leading up to the COVID-19 pandemic that began in winter 2020, but has recovered less quickly than overall district enrollment since the pandemic.

**5b. Average class sizes vary considerably across middle schools, and it is unclear whether existing district class size guidelines represent the ideal class size or a “worst case” scenario. Additionally, absent a universal definition of what constitutes a “full” teacher workload, staffing precisely to enrollment is impossible.**

The district currently has a target class size of 22 students and a maximum class size of 24 students at the middle school level. Analysis of SY21-22 student enrollment data across the district’s eight middle schools reveals that average class size varied considerably across schools, though no school had an average class size that exceeds the district’s target class size of 22 students.

**Figure 5.2 Average Class Sizes by School  
SY21-22**

| School                       | Average Class Size* |
|------------------------------|---------------------|
| Florida Ruffin Ridley School | 21.1                |
| John D. Runkle School        | 19.7                |
| Amos A. Lawrence School      | 18.7                |
| John Pierce School           | 18.6                |
| William H. Lincoln School    | 18.2                |
| Michael F. Driscoll School   | 17.8                |
| Heath School                 | 16.9                |
| Edith C. Baker School        | 15.7                |
| <b>District</b>              | <b>18.3</b>         |

*\*Excludes WIN, tutorial, advisory, special education, and EL classes*

- Average middle school class sizes for SY21-22 in the district range between 15.7 - 21.1 students per class, a ~34 percent difference.
- A total of 19 (out of 428) core classes (math, science, ELA, social studies) in SY21-22 across the middle schools have enrollment above the target class size of 22 students. One core class has enrollment above the maximum class size of 24 students.
- Excluding performing arts, a total of 29 (out of 322) non-core classes (visual arts, conservatory, world language, wellness) in SY21-22 have enrollment above the target class size of 22 students. Three non-core classes have enrollment above the maximum class size of 24 students.

Multiple teachers and staff in the district shared frustrations about the difference in class sizes and workload expectations, noting that teaching a class of 12 students, for example, is a very different experience than teaching a class of 24 students. Representative stakeholder quotes include:

- “It feels like class sizes are huge at our school. Down the street, there are 12 kids per class. The work expectations are the same at both schools with half the kids and more time.”
- “It’s a no-brainer that the more students a teacher has, the workload isn’t only increased because of the amount of grading to do; there would be more IEP / 504 meetings, more parent contact, more IPRs and report cards, and more students to try to connect with on a non-academic level. I would be livid if I was

a parent of a student whose core content teachers had over 100 students and my child's friend in another PSB neighborhood was taught by teachers who only have 60 students.”

- “If I had a magic wand, I would make more equitable caseload in terms of number of classes and number of students and grade levels.”

SY21-22 core subject staffing at the middle schools was further examined based on existing district class size guidelines. A staffing scenario was run to assess the impact of staffing more precisely to the existing district class size target of 22 students. The impact on staffing more precisely was examined by school (figure 5.3) and by department (figure 5.4).

The figures below represent “optimal efficiency” and may be untenable based on existing staffing and teaming models at the middle schools. As such, these figures should be seen as directional to inform theoretical shifts in staffing.

**Figure 5.3 Theoretical Number of Section Savings Based on Student Enrollment by School  
SY21-22**

| School                       | Theoretical<br>Section Savings* |
|------------------------------|---------------------------------|
| John Pierce School           | 3                               |
| John D. Runkle School        | 0                               |
| Amos A. Lawrence School      | 5                               |
| Edith C. Baker School        | 14                              |
| Florida Ruffin Ridley School | 4                               |
| Heath School                 | 0                               |
| Michael F. Driscoll School   | 5                               |
| William H. Lincoln School    | 1                               |
| <b>District Total</b>        | <b>32</b>                       |

*\*Excludes WIN, tutorial, advisory, special education, and EL classes*

Were the middle schools to staff more precisely to a target class size of 22 students, the district could theoretically reduce the number of sections required across the eight middle schools by 32 sections, which is the equivalent of ~6-8 FTE. (Note: exact FTE equivalent cannot be calculated without consistent definition of teacher workload.)

**Figure 5.4 Theoretical Number of Section Reductions Based on Student Enrollment by Department SY21-22**

| Department            | Theoretical Section Savings* |
|-----------------------|------------------------------|
| English               | 7                            |
| Math                  | 7                            |
| Science               | 1                            |
| Social Studies        | 2                            |
| World Language        | 4                            |
| Wellness              | 5                            |
| Visual Arts           | 4                            |
| Performing Arts       | 2                            |
| <b>District Total</b> | <b>32</b>                    |

*\*Excludes WIN, tutorial, advisory, special education, and EL classes*

Similarly, were the district to staff more precisely to the existing class size target of 22 students, it could save between 1-7 sections per department across the eight middle schools.

*Note: Multiple middle schools in the district adjusted staffing practices for SY22-23 based on changes in student enrollment. Future changes to middle school staffing practices should be based on up-to-date staffing figures.*

## **Finding 6: There is no district-level point person to direct, monitor, or support the development of middle school schedules.**

### **6a. Some district guidelines regarding middle school instruction, programming, and use of time exist but are not always followed with fidelity at the school level.**

Baseline district schedule guidelines exist for the start and end of the school day (including shortened Friday schedule for students) as well as frequency of art, PE, health, conservatory, and world language classes (see figure 1.3 on page 14 for sample existing guidelines). Most other existing guidelines are department-specific and are created by district-level subject department chairs. This includes use and assignment of shared staff. The district currently does not have a master schedule guideline document to collate and disseminate all middle school schedule guidance or required time on learning by subject and grade for principals and school leaders.

Multiple school leaders shared that existing middle school schedule guidelines have traditionally been limited in number, level of detail, and consistency in which they are enforced. Representative quotes from stakeholders include:

- “Historically, we haven’t had a lot of guidance from the district. Every building does its own thing.”
- “School schedules are very school-based. We have district guidelines but not every school follows the guidelines. When they do follow them, they can be great and kids can get equitable experiences.”
- “We all don’t operate on the same system for schedules. Our schedules reflect what works for us and the scheduler. We aren’t sharing best practices. There’s no way our schedules are replicating best practice. We’re replicating a very messy wheel all the time. Each template looks different across schools, even though we have similar schedules and sections. We don’t have a good way of comparing notes because we template it out so differently.”
- “Scheduling guidance from the district is based on FTE and whether we have to share staff, which creates new constraints.”

### **6b. There is no documented process, owner, or timeline at the district level to manage and coordinate the scheduling process at the middle school level.**

There is currently no single “owner” of the middle school schedule process at the district level. The district does not have a common timeline or set of published milestones to guide when schools should begin creating schedules, what scheduling steps should be completed in what order and by when, or when schedules should be complete. School leaders reported that middle school schedules are created at different and varying timelines over the course of the winter, spring, and summer.

Additionally, multiple school leaders and those involved in the schedule creation noted that the timing in which budget data is made available to make staffing decisions (which then inform scheduling decisions) is challenging. Representative quotes from stakeholders include:

- “The information we need to have to build the schedule isn’t given to us in a timely basis. This goes back to how the town does its budget.”
- “Most principals aim to have schedules done before teachers go home for the summer, but that requires moving up the budget process, because we don’t know staffing and need decisions made before mid-June.”

#### **6c. The district currently lacks effective systems to reliably collect, validate, and analyze school-level staffing and schedule data.**

Schedule and staffing data from all eight middle schools was examined in detail as part of this study. Data shared by the district from district information systems was reviewed, organized, and validated with principals and school leaders. During data validation meetings, multiple school leaders and those involved in scheduling noted that, while schools are required to enter schedule and staffing data into the district data system, what is in the district system does not always accurately reflect current practices at the schools. Principals and school leaders highlighted a high number of inconsistencies between staff schedule data compiled from district data systems and actual teacher schedules. Common inconsistencies between district data and school-level data included differences in:

- Number of WIN blocks in a teacher schedule
- Part-time or shared teacher assignments by school
- Total number of sections taught by teachers (especially non-core teachers that taught both elementary and middle school grades)

#### **6d. The level of staff technical scheduling skills varies between middle schools, with limited to no support available from the district for school-based leaders and schedulers.**

As shared in section 6c., school teams currently create schedules using a mix of approaches and tools. There is currently no formal “scheduling expert” at the district level to support school leaders create schedules, though support from district staff creating middle school schedules was informally offered in the past. School leaders expressed varying level of comfort and expertise creating school schedules, and many noted creating master schedules requires a substantial investment of time and energy over the spring and summer.

#### **6e. Many teachers and staff shared that the frequency, degree, and perceived lack of communication regarding changes to middle school schedules is challenging.**

Frustration regarding communication about school schedules was most common among teachers and school leaders, though for different reasons. As one teacher noted during focus groups, “my schedule changes every year, and I’m never really sure why.” This frustration and a perceived lack of communication about rationale behind schedule changes was shared by many teachers (though not universally) over the course of stakeholder engagement. On the other hand, school leaders involved in the creation of school schedules noted that last-minute or unexpected changes by the district to shared or part-time staff assignments are the most challenging to respond to and require the most re-work of the schedule to adjust to. Additional details regarding shared staff can be found in section 8b (page 49).

## **Finding 7: The district's current approaches to music (conservatory) programming as well as shared staff in select subjects have a disproportionate impact on middle school schedules.**

### **7a. Timing of conservatory classes are coordinating centrally and are the first "block" of time scheduled at the 8 middle schools, which therefore impacts all other scheduling choices.**

All middle school students receive conservatory for ~45 minutes 2x/week for the entire school year. Students choose from a set of six options which conservatory class they would like to take. A total of nine teachers are shared across the district's eight middle schools to provide instruction as part of the conservatory program. Conservatory teachers "flood" each school twice a week to provide instruction. For example, in SY2021-2022, all conservatory classes across grades 4-8 were held at Baker middle school on Monday and Thursday mornings between 8:05 – 9:40am. In this way, conservatory programming creates a common ~45-minute planning period for all non-conservatory teachers of the same grade level twice a week.

The conservatory schedule is set at the district-level by the performing arts department chair in partnership with school principals. A "baseline" conservatory schedule is created by the performing arts director each year, which is then refined and adjusted based on principal requests and preferences (e.g., principals might request a 5–10-minute adjustment as to when conservatory happens at their school or swap times with another school). The district has sought to continuously improve the conservatory schedule and respond to school-level needs on an annual basis.

The conservatory schedule is reportedly the first component of the schedule at any middle school to be set. This is due to the need to coordinate conservatory teacher schedules, all of whom are shared across the district's middle schools. Based on existing conservatory programming structures, the district does not have the staffing required to host conservatory at two schools simultaneously. The conservatory schedule is therefore a significant driver of all other scheduling options and considerations at the middle school level.

Many stakeholders highlighted both impressive programming provided as part of conservatory (see commendation #3, page 5) as well as the challenge created by the scheduling of conservatory. Representative quotes from stakeholders include:

- "Once conservatory gets locked in, we have to schedule around those blocks. It's challenging."
- "The schedule is created around conservatory. We all get together and try to discuss with the district's performing arts coordinator. The benefit is the common planning time teachers get."
- "If I could change one thing, it would be to take away conservatory. It dominates the schedule and not all students want to take it."
- "Conservatory drives the schedule, so unless something is done about it, I'm not sure what a 'better' schedule could even begin to look like."

### **7b. The district's current approach to sharing staff both across schools as well as between elementary and middle school grades within a school is simultaneously cost-effective and limiting.**

Sharing teachers and staff across schools can be both an effective as well as cost-effective strategy that many districts nationally utilize. This is especially the case for districts like the Public Schools of Brookline which have many smaller schools (based on student enrollment) with campuses that are geographically close. The district



currently utilizes shared staff in two ways at the K-8 level: 1) sharing teachers between elementary (K-5) and middle school (6-8) grades, and 2) sharing teachers between different middle schools. Based on SY21-22 data, the district had:

- Most full-time non-core subject teachers that teach at the middle school level teach a mix of elementary grades (K-5) and middle school grades (6-8). *(Note: exact and validated part-time teacher assignment could not be confirmed as part of this project due to limitations of district data systems. See section 6c. on page 47.)*
- At least 8 shared music (conservatory) teachers that teach across the middle schools.
- At least 11 non-core subject, non-conservatory (art, PE, health, world language) teachers that teach across multiple middle schools in the district. *(Note: exact and validated schedule and course assignment data for non-core teachers could not be confirmed as part of this project due to limitations of district data systems. See section 6c. on page 47.)*

From one perspective, the district should be commended for using shared staff to help ensure equitable opportunities for students across schools. At the same time, the district's existing use of shared teachers and staff, especially across middle schools, creates significant constraints on school schedules and limits the flexibility school leaders have deciding when certain courses or activities run. This is because courses taught by shared staff must be scheduled early in the scheduling process, which limits options for scheduling other courses.

Many middle school leaders and those involved in scheduling highlighted the challenge of sharing staff, either across elementary and middle school grades *within* a school and/or across multiple middle schools.

Representative quotes from stakeholders include:

- "Shared staff are killing us—they are simultaneously helpful, because we save money, but extremely expensive, because they drive many schools' schedules."
- "The schools use a lot of shared staff. It would be great if the schools could own more of their staff in full."
- "I can live with *intra-school* staff sharing if we had less *inter-school* sharing of staff."
- "The most significant challenge with the current schedule is the K-5 to 6-8 split. You share world language and specials teachers. You have to build a schedule around shared staff."
- "The schedule is very driven by district-wide schedule components and shared staff, there are different needs of elementary and middle schools."

Relatedly, multiple stakeholders noted the challenge of organizing shared staff between buildings and a perceived lack of communication and coordination between school-level leaders and district administrators.

Representative quotes from stakeholders include:

- "What's tricky is the shared staff that keeps getting changed across schools. It has been a big challenge this year."

- “Shared staff is really tricky. Coordinators hire and do budget allocations at the district level. For example, visual arts coordinator determines who is going to be shared staff. We don’t always get updates at the school level from coordinators. Things are shifting because of budgeting. It creates so much chaos at the ground level, we don’t know how to create a cohesive program and schedule. There is stuff happening at the district level that impacts us.”

## **Finding 8: The district intentionally does not currently provide advanced-level academic courses at the middle school level.**

### **8a. The district moved away from offering “gifted and talented” programming and advanced-level academic courses to students and currently only offers one academic level of each course at each grade level.**

The district has not run separate "gifted" or "advanced" classes (e.g., 8<sup>th</sup> grade algebra, accelerated ELA, etc.) at the middle school level for at least a decade according to senior district leaders. Exact rationale behind this decision, which was made prior to the tenor of current senior district leaders, was not available.

More recently, the district hosted an *Enrichment & Challenge Support* (ECS) program, which was primarily a pull-out program for students identified as advanced in K-8. Most ECS programming, however, was conducted in K-5, and in ~2016 ECS shifted from a pull-out model to more of a teacher coaching model. The intent behind this shift was to support more open-ended and challenging work across all classrooms. In ~2019, ECS positions were eliminated across the district primarily for budgetary reasons.

Currently, students have access to advanced-level instruction via differentiated tier 1 instruction provided by teachers. A small number of stakeholders in focus grouped shared that some teachers at some schools in the district differentiate instruction for students in such a way that students with demonstrated ability are provided with more challenging or rigorous materials and assignments. This practice is limited in scale and not organized in any systematic way in the district based on information shared by stakeholders in focus groups.

### **8b. Many students and parents expressed a high-degree of interest in the district providing more opportunities to challenge students, especially in math.**

Many parents and students in the district shared a common frustration about a perceived lack of rigor at the middle school level in general and in math in particular. Concerns shared by stakeholders focused on a perceived need to provide more challenging academic and/or enrichment opportunities to students rather than a specific desire for advanced level coursework or a gifted and talent program. Representative quotes from stakeholders include:

- “I would like more opportunities to be challenged. I do out-of-school math because classes here have been pretty easy. I want classes to be more challenging.”
- “I feel like math has been outsourced to Russian Math. I’m worried about my kids transition to high school. Students don’t really have any homework. If you don’t do Russian Math, then math is challenging in high school.”
- “There was never a harder option to do a class. We had to cater to the lowest person in the class. For example, in math, there was never an opportunity to do something harder. Things were too easy and we had to deal with it.”
- “Seems to be very few options for enrichment in math at our school, and possibly others. Our son has asked for more challenge, and we have asked for help on this, but it has not gone anywhere. Essentially, we are just in a holding pattern until high school.”

- “I feel as though the math curriculum was not nearly challenging/engaging enough for my abilities and there was little to no enrichment provided if I desired it. All I was given were a few extra word problems on Canvas.”

Multiple parents also shared the perception that the degree to which students are challenged in the district is lower relative to surrounding private schools. Some families noted this perceived lower level of rigor as a reason that some families reportedly send their students to private school for grades 6-8 before returning to the district for high school. Representative quotes from stakeholders include:

- “For kids that want more of a challenge in any subject, there is no extra learning. My kids are often very bored, I hate to say it. I sent my kids to private school during the pandemic and they learned so much more at the private school. A trend of parents is sending kids to private school for middle school and then they come back to Brookline High School.”
- “I would like the curriculum to be slightly more challenging and the expectations slightly higher so that kids learn more and fewer kids would depart the Public Schools of Brookline Middle School for private school. There is a sense that private middle school is far more rigorous in math, writing, and factual content, and that kids who stay in PSB middle school would fall behind and not be as prepared for high school and college success.”
- “After being in the PSB system for 15 years (3 kids) and having many friends depart to private school, there is a sense that kids in private schools learn more facts and writing skills in grades 6-8 than the kids in PSB middle school. The teachers in the district are fantastic, I just wonder whether the expectations are a little low and whether more content could be taught.”

Examination of district middle school enrollment patterns demonstrate a net decrease in student enrollment between 5<sup>th</sup> grade and 8<sup>th</sup> grade in the district between SY2010 and SY2015. (Note: SY2015 is the year current high school seniors started 5<sup>th</sup> grade in the district.) Enrollment of cohorts of students between 5<sup>th</sup> and 8<sup>th</sup> grade decreased by between 1-10% between SY2010 and SY2015, though this decrease varies considerably by year and reflects many factors (e.g., students moving in/out of the district, out-of-district student placement, etc.)

## **Executive Summary of Practices to Consider**

**Practice to Consider 1: Establish a district-wide vision and comprehensive set of instructional and programmatic guidelines for middle school.**

**Practice to Consider 2: Create common dedicated content-specific academic intervention at the middle school level in reading, writing, and math.**

**Practice to Consider 3: Seek additional opportunities to take advantage of the unique benefits of the K-8 model to build student engagement.**

**Practice to Consider 4: Refine the district's approach to personalized pathways to expand opportunities and provide more voice and choice to students.**

**Practice to Consider 5: Identify opportunities to reduce inconsistencies in teacher workload where practical given school size and student enrollment.**

**Practice to Consider 6: Consider focusing specials teachers in one of two grade bands (e.g., K-5, 6-8) and improve coordination of shared staff between buildings.**

**Practice to Consider 7: Establish a clear process and district-level point person to guide and support the creation of middle school schedules on an annual basis.**

## Practices to Consider

### Practice to Consider 1: Establish a district-wide vision and comprehensive set of instructional and programmatic guidelines for middle school.

Craft a district-wide vision that more clearly outlines a student's journey through grades K-12 with particular attention to the role and purpose of middle school grade levels. The vision should provide clarity regarding any potential differences in programming, staffing, and/or experience between grade 6 and grades 7 and 8. As an example, the district may consider whether a student's experience in grade 6 should be more "elementary" in flavor and include grade 6 core teachers teaching multiple subjects (e.g., teaching math and science instead of just math) or more "secondary" in flavor in which teachers continue to specialize in one subject. Visioning should reflect [Massachusetts teaching license](#) requirements, which vary by grade level depending on field and subject (e.g. a teacher with a general Elementary teaching license can teach grades 1-6 while a teacher with a Middle School: Mathematics/Science license can teach grades 5-8).

Based on the district's vision for middle school, create district-wide instructional, programmatic, and schedule guidelines that set expectations for how time should be used at the middle school level. Guidelines can be a mix of expectations that are "tight" (i.e., the same or very similar across all schools) and expectations that are "loose" (i.e., customized by school). Guidelines should be crafted in partnership with school leaders and detail items such as:

- Required annual minutes per subject per grade
- Required versus elective courses per grade
- Middle school approach to academic intervention
- Middle school approach to SEL and relationship building

### Practice to Consider 2: Create common dedicated content-specific academic intervention at the middle school level in reading, writing, and math.

Like students in many other districts nationally, some students in the Public Schools of Brookline require additional time beyond regular class time to master the skills and content necessary to be successful. This is especially true for knowledge and skills in foundational subjects like math, reading, and writing, which are necessary for nearly every other type of course at every grade level. Science, social studies, and world languages are difficult to master without strong literacy skills, for example.

The district should consider creating content-specific, extra-time intervention courses, such as a math foundations course that is built into a student's schedule in addition to grade-level core instruction. During the extra-time intervention, a content-strong teacher should offer need-based, just-in-time academic supports that help address students' misconceptions about or challenges with both current-year and prior-year content. Instruction provided during extra-time intervention should be direct instruction that is targeted to identified skill needs and misunderstandings.

To create time in student schedules for academic intervention, the district may consider removing the current WIN block. (Note: doing so may require creation of additional programming or courses for students that do *not* require academic intervention.)

### **Practice to Consider 3: Seek additional opportunities to take advantage of the unique benefits of the K-8 model to build student engagement.**

Many stakeholders noted the exciting and unique benefits of the district's K-8 school model, including:

- The creation of vibrant school communities that provide a nurturing space for relationships between students and staff to develop and strengthen over many years.
- The opportunity for continuity of parent/family involvement in student learning.
- The opportunity for older students to serve, partner with, and advise younger students.

Some schools in the district have already created a mix of formal and informal leadership and service opportunities for middle school students. The district can consider codifying and expanding opportunities for middle school students to work with, serve, and provide leadership to their elementary peers. This may include opportunities such as cross-grade mentor systems, multi-age projects or performances, or more school-wide events and celebrations. Doing so can help further empower middle school students to develop important leadership skills and ensure the district fully utilizes the benefits of the K-8 model.

### **Practice to Consider 4: Refine the district's approach to personalized pathways to expand opportunities and provide more voice and choice to students.**

Identify ways to incorporate more student voice and choice into middle school academic programming and course offerings. This may involve offering more student voice over courses that are offered and/or more student choice over courses that students take at any given time. Student choice may be bounded (i.e., students must select from a prescribed set of course options) and/or scaled (i.e., students in 6<sup>th</sup> grade may receive relatively limited choice, while students in 8<sup>th</sup> grade receive greater choice).

Create a consistent advisory program that helps students transition into middle school and prepare for high school. Set a defined range for required frequency and duration of advisory programming at each grade level. Partner with teachers and school counselors to determine goals for advisory and seek evidence-based curriculum aligned to established goals.

### **Practice to Consider 5: Identify opportunities to reduce inconsistencies in teacher workload where practical given school size and student enrollment.**

Create district-wide teacher workload guidelines that set expectations regarding the number of grade levels, subjects, and sections teachers at the middle school can be expected to teach (e.g., 1 subject in 1 grade level, 2 subjects in 1 grade level, etc.), including which core teachers at "3 section schools" teach four or five sections in a given year. These guidelines should be informed by school size and enrollment and reflect the reality that not all teachers in the district at the middle school level will have the exact same teaching experience.

Review existing middle school class size targets and, as necessary, adjust figures and/or staffing assignments based on projected middle school enrollment. Ensure clarity among school leaders regarding the purpose and value of class size targets.

### **Practice to Consider 6: Consider focusing specials teachers in one of two grade bands (e.g., K-5, 6-8) and improve coordination of shared staff between buildings.**

Conduct a detailed review of specials staffing assignments at all middle schools to inform potential ways to minimize teaching assignments across both elementary and middle school grades. If making adjustments to specials academic programming (i.e., course offerings, frequency of courses, etc.), actively seek to focus specials teachers in either elementary or middle school grade levels.

Review systems to manage and assign shared or part-time staff and seek ways to improve coordination between curriculum coordinators and school leaders related to shared staff across buildings.

### **Practice to Consider 7: Establish a clear process and district-level point person to guide and support the creation of middle school schedules on an annual basis.**

Create a district-level middle school schedule guide that outlines key schedule expectations, non-negotiables, time on learning benchmarks, and programming requirements. Assign a clear owner of the guide at the district level and update the guide on an annual basis in partnership with school principals.

Hire or assign a part-time FTE to provide technical support to schools as part of the scheduling process at the middle school level. This individual should be extremely proficient with the district's schedule software and serve as auxiliary support to school leaders building school schedules.

Review and update existing district data systems to ensure accuracy of staffing figures and assignments across middle schools.



## Appendix

### Appendix Figure 1 – List of Stakeholders Engaged

A wide range of stakeholders were engaged in this process to provide a diverse set of perspectives, opinions, and insights. A summary of stakeholder groups engaged is outlined below.

| Stakeholder Group        | Role                                                   | Engagement                                                                                        | Dates of Engagement |
|--------------------------|--------------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------|
| Senior District Leaders  | Superintendent                                         | 1:1 interview with each district leader                                                           | 06/09/22            |
|                          | Senior Director of Teaching and Learning for Secondary |                                                                                                   | 06/09/22            |
|                          | Senior Director of Teaching and Learning K-8           |                                                                                                   | 06/09/22            |
|                          | Senior Director of Equity                              |                                                                                                   | 06/09/22            |
|                          | Senior Director of Data & Strategy                     |                                                                                                   | 06/09/22            |
|                          | Computer Applications Support Specialist               |                                                                                                   | 06/09/22            |
|                          | Assistant Director of Social-Emotional Learning        |                                                                                                   | 06/09/22            |
|                          | Special Education Director                             |                                                                                                   | 06/15/22            |
|                          | Director of Guidance and Clinical Services             |                                                                                                   | 06/15/22            |
|                          | Deputy Superintendent for Student Services             |                                                                                                   | 06/16/22            |
|                          | Performing Arts Director                               |                                                                                                   | 06/16/22            |
|                          | Special Education Director                             |                                                                                                   | 06/16/22            |
|                          | Deputy Superintendent of Teaching and Learning         |                                                                                                   | 06/21/22            |
| Middle School Principals | Edith C. Baker School                                  | 1:1 interview with each principal (2 interviews per principal)                                    | 06/08/22            |
|                          | Michael Driscoll School                                |                                                                                                   | 06/08/22            |
|                          | Heath School                                           |                                                                                                   | 06/08/22            |
|                          | William H. Lincoln School                              |                                                                                                   | 06/08/22            |
|                          | Florida Ruffin Ridley School                           |                                                                                                   | 06/08/22            |
|                          | John D. Runkle School                                  |                                                                                                   | 06/08/22            |
|                          | John Pierce School                                     |                                                                                                   | 06/08/22            |
|                          | Amos A. Lawrence School                                |                                                                                                   | 06/15/22            |
| School-based educators   | Heath School                                           | 1 focus group to build a broad and deep understanding of current schedules strengths & challenges | 10/20/22            |
|                          | John Pierce School                                     |                                                                                                   | 10/21/22            |
|                          | Science teachers                                       |                                                                                                   | 10/27/22            |
|                          | Social Studies teachers                                |                                                                                                   | 10/27/22            |
|                          | William H. Lincoln School                              |                                                                                                   | 10/31/22            |
|                          | Florida Ruffin Ridley School                           |                                                                                                   | 10/31/22            |
|                          | Edith C. Baker School                                  |                                                                                                   | 11/02/22            |
|                          | Amos A. Lawrence School                                |                                                                                                   | 11/03/22            |
|                          | ELA teachers                                           |                                                                                                   | 11/08/22            |
|                          | English Language teachers                              |                                                                                                   | 11/09/22            |
|                          | Math teachers                                          |                                                                                                   | 11/09/22            |
|                          | Michael Driscoll School                                |                                                                                                   | 11/15/22            |

|                                                    |                                          |                                                                                |                                              |
|----------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------|
|                                                    | John D. Runkle School                    |                                                                                | 11/15/22                                     |
|                                                    | World Language teachers                  |                                                                                | 11/17/22                                     |
|                                                    | Conservatory teachers                    |                                                                                | 11/30/22                                     |
|                                                    | Guidance counselors                      |                                                                                | 12/05/22                                     |
|                                                    | Curriculum Coordinators                  | 2 focus groups                                                                 | 10/21/22 and 11/09/22                        |
|                                                    | Visual Arts and Wellness                 | 4 focus groups                                                                 | 11/16/22<br>11/17/22<br>11/29/22<br>12/01/22 |
|                                                    | Special Education teachers               | 2 focus groups                                                                 | 12/01/22 and 12/05/22                        |
|                                                    | Brookline Educators Union                | 1-on-1, remote interview with Brookline Educators Union leadership and members | 12/20/22                                     |
| 6 <sup>th</sup> – 8 <sup>th</sup> grade students   | Edith C. Baker School                    | 2 focus groups (6th and 7th/8th)                                               | 11/2/22                                      |
|                                                    | William H. Lincoln School                | 1 focus group                                                                  | 11/2/22                                      |
|                                                    | Amos A. Lawrence School                  | 1 focus group                                                                  | 11/3/22                                      |
|                                                    | Florida Ruffin Ridley School             | 1 focus group                                                                  | 11/3/22                                      |
|                                                    | John Pierce School                       | 1 focus group                                                                  | 11/07/22                                     |
|                                                    | Michael Driscoll School                  | 1 focus group                                                                  | 11/15/22                                     |
|                                                    | John D. Runkle School                    | 1 focus group                                                                  | 11/15/22                                     |
|                                                    | All schools                              | Survey of all grade 6-8 students                                               | 12/01/22                                     |
|                                                    | Heath School                             | 2 focus groups                                                                 | 10/20/22<br>12/05/22                         |
|                                                    | Students in METCO                        | 1 focus group                                                                  | 01/05/23                                     |
| 11 <sup>th</sup> & 12 <sup>th</sup> Grade Students | Brookline High School                    | 1 focus group                                                                  | 11/02/22                                     |
|                                                    |                                          | Survey of all grade 9-12 students                                              | December 2022                                |
| Brookline Families                                 | Families of 6-8 students                 | 4 focus groups                                                                 | 11/02/22<br>11/03/22<br>11/09/22<br>11/15/22 |
|                                                    | Families of students with disabilities   | 2 focus groups                                                                 | 12/12/22<br>12/13/22                         |
|                                                    | Families of students in Steps to Success | 1 focus group                                                                  | 12/14/22                                     |
|                                                    | Families of students in METCO            | 1 focus group                                                                  | 12/15/22                                     |

## Appendix Figure 2 – Brookline Middle School Survey Completion Data

Brookline middle school students were surveyed across the 8 middle schools to share their experience and offer feedback on current schedules and programming. The survey consisted of open-ended, Likert scale, and demographic questions. The survey was confidential and anonymous.

| School                       | 6 <sup>th</sup> Grade | 7 <sup>th</sup> Grade | 8 <sup>th</sup> Grade |
|------------------------------|-----------------------|-----------------------|-----------------------|
| Amos A. Lawrence School      | 8                     | 3                     | 28                    |
| Edith C. Baker School        | 11                    | 14                    | 14                    |
| Florida Ruffin Ridley School | 34                    | 50                    | 73                    |
| Heath School                 | 20                    | 23                    | 20                    |
| John D. Runkle School        | 17                    | 26                    | 19                    |
| John Pierce School           | 47                    | 40                    | 28                    |
| Michael Driscoll School      | 19                    | 25                    | 41                    |
| William H. Lincoln School    | 2                     | 4                     | 2                     |
| Total                        | 158                   | 185                   | 225                   |

## Appendix Figure 3 – Brookline High School Survey Completion Data

Brookline High School students were surveyed to share their experience and offer feedback on their middle school schedules and programming. The survey consisted of open-ended, Likert scale, and demographic questions. The survey was confidential and anonymous.

| School                       | HS Students |
|------------------------------|-------------|
| Amos A. Lawrence School      | 19          |
| Edith C. Baker School        | 23          |
| Florida Ruffin Ridley School | 30          |
| Heath School                 | 25          |
| John D. Runkle School        | 27          |
| John Pierce School           | 39          |
| Michael Driscoll School      | 23          |
| William H. Lincoln School    | 16          |
| Total                        | 202         |

## Appendix Figure 4 – Current Middle School Survey Results – Potential Classes of Interest

| Courses that students would like to take that are not currently offered | Number of Mentions |
|-------------------------------------------------------------------------|--------------------|
| Cooking                                                                 | 47                 |
| Theater                                                                 | 22                 |
| Life skills                                                             | 20                 |
| Home economics                                                          | 19                 |
| Computer science                                                        | 18                 |
| Financial literacy                                                      | 18                 |
| Art                                                                     | 17                 |
| Coding                                                                  | 16                 |
| Baking                                                                  | 15                 |
| Relationship building                                                   | 15                 |
| Study hall                                                              | 15                 |
| Accelerated course                                                      | 14                 |
| Dance                                                                   | 13                 |
| Sports                                                                  | 12                 |
| Creative writing                                                        | 10                 |
| Current events                                                          | 10                 |
| Engineering                                                             | 10                 |
| Self defense                                                            | 8                  |
| Business                                                                | 7                  |
| Video games                                                             | 7                  |
| French                                                                  | 7                  |
| Sewing                                                                  | 7                  |
| Video games                                                             | 7                  |
| Woodworking                                                             | 7                  |
| Biology                                                                 | 6                  |
| Chemistry                                                               | 6                  |
| PE                                                                      | 6                  |
| Physics                                                                 | 6                  |
| Technology                                                              | 6                  |
| Piano                                                                   | 5                  |
| Swimming                                                                | 5                  |
| American Sign Language                                                  | 4                  |
| Cinema                                                                  | 4                  |
| Geography                                                               | 4                  |
| Hebrew                                                                  | 4                  |
| History                                                                 | 4                  |

|                           |   |
|---------------------------|---|
| Mandarin                  | 4 |
| Metal working             | 4 |
| Animals                   | 3 |
| Basketball                | 3 |
| Hockey                    | 3 |
| Medicine                  | 3 |
| Movie production          | 3 |
| Music                     | 3 |
| Photography               | 3 |
| Reading                   | 3 |
| Art history               | 2 |
| Astronomy                 | 2 |
| Choir                     | 2 |
| Economics                 | 2 |
| Fashion                   | 2 |
| Gardening                 | 2 |
| Health                    | 2 |
| Intervention              | 2 |
| Italian                   | 2 |
| Japanese                  | 2 |
| Latin                     | 2 |
| Martial arts              | 2 |
| Model UN                  | 2 |
| Music production          | 2 |
| Pottery                   | 2 |
| Psychology                | 2 |
| Robotics                  | 2 |
| Soccer                    | 2 |
| Social-emotional learning | 2 |
| Tennis                    | 2 |
| Arabic                    | 1 |
| Architecture              | 1 |
| Chess                     | 1 |
| Fencing                   | 1 |
| Football                  | 1 |
| German                    | 1 |
| Graphic design            | 1 |
| Gymnastics                | 1 |
| Ice skating               | 1 |
| Korean                    | 1 |
| Lacrosse                  | 1 |
| Music theory              | 1 |
| Mythology                 | 1 |
| Rock climbing             | 1 |
| School newspaper          | 1 |
| Skiing                    | 1 |

|            |   |
|------------|---|
| Spanish    | 1 |
| Volleyball | 1 |