



Implementing MTSS in Secondary Schools: Challenges and Strategies

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The purpose of this brief is to provide information about and practical strategies to help secondary schools implement a Multi-Tiered System of Supports (MTSS) with an academic focus. The Region 6 Comprehensive Center (RC6) at the SERVE Center at the University of North Carolina at Greensboro, and RC6 partner, Southern Regional Education Board (SREB), developed this brief at the request of, and in collaboration with, the South Carolina Department of Education (SCDE).

The document begins with a short definition of MTSS, followed by a description of the main challenges secondary schools report facing when implementing MTSS. It then offers possible solutions for secondary schools who are in early implementation phases. These strategies come both from research and from practice in secondary schools that have implemented MTSS.

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Implementing MTSS in Secondary Schools: Challenges and Strategies

Introduction

The purpose of this brief is to provide information about and practical strategies to help secondary schools implement a Multi-Tiered System of Supports (MTSS) with an academic focus. The Region 6 Comprehensive Center (RC6) at the SERVE Center at the University of North Carolina at Greensboro, and RC6 partner, Southern Regional Education Board (SREB), developed this brief at the request of, and in collaboration with, the South Carolina Department of Education (SCDE).

The document begins with a short definition of MTSS, followed by a description of the main challenges secondary schools report facing when implementing MTSS. It then offers possible solutions for secondary schools who are in early implementation phases. These strategies come both from research and from practice in secondary schools that have implemented MTSS.

Structure of MTSS

The [MTSS Center](#) (formerly the National Center on Response to Intervention) at the American Institutes for Research (AIR) defines MTSS as follows:

A multi-tiered system of supports (MTSS) is a proactive and preventative framework that integrates data and instruction to maximize student achievement and support students' social, emotional, and behavior needs from a strengths-based perspective. MTSS offers a framework for educators to engage in data-based decision making related to program improvement, high-quality instruction and intervention, social and emotional learning, and positive behavioral supports necessary to ensure positive outcomes for districts, schools, teachers, and students.

The [South Carolina Department of Education's South Carolina Multi-Tiered System of Supports \(SCMTSS\) Framework and Guidance Document](#) establishes MTSS as a framework for addressing the needs of the whole child—academically, behaviorally, socially, and emotionally—through a holistic and personalized system of learning and supports. MTSS also reflects the principles of [South Carolina's School Improvement Cycle](#), which includes diagnosing deficiencies, selecting evidence-based strategies and intervention, developing goals, implementing a plan for improvement, assessing the impact of the plan, and revising the plan as needed based on outcomes.

In essence, MTSS provides the structure for the process for identifying students who need support with academic, behavioral, or other needs. While MTSS can be applied to address academic, behavioral, or social and emotional difficulties and more, this document focuses on how secondary schools can use MTSS processes to address academic needs.

MTSS Challenges in Secondary Schools

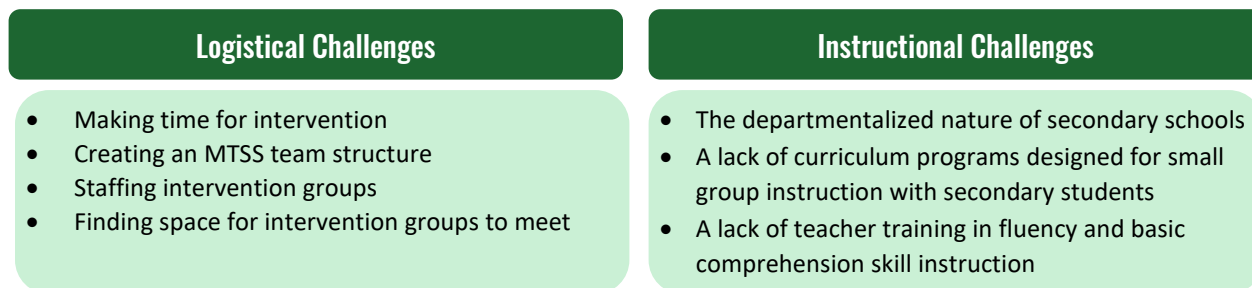
A quick review of literature on the topic of MTSS reveals that most the current resources pertain to elementary implementation. There is a relative lack of resources that address the specifics and complexities of MTSS practice at the middle and high school levels that make up secondary education.

In secondary schools, larger student bodies mean fewer resources for struggling students and make it more difficult to monitor and provide support to all students who need it. Staff may also have multiple responsibilities and lack the time required to systematically address student difficulties (Clark and Dockweiler, 2019). While most elementary schools are similar in their structure and organization, in secondary schools these can vary much more widely. The main elements of MTSS may remain the same across grade levels, but they cannot just be transplanted from elementary to secondary; they must be modified to fit the different contexts of secondary schools (Daye, 2019).

“The biggest single barrier to secondary MTSS implementation is a confused or unclear purpose,” according to Jimerson, Burns, and VanDerHeyden (2016, p. 564). Each school needs to determine its purpose and scope for MTSS. For example, the MTSS focus at the secondary level might be academic but not include all students or all content areas (Center on Multi-Tiered System of Supports, 2021). Generally, the academic response-to-intervention process in high school “can serve as a framework for drop-out prevention and content recovery to ensure that students pass core courses and exams and ultimately graduate” (Muoneke & Shankland, 2009).

In 2021, the RC6, in collaboration with the SCDE, conducted interviews with school and district staff in 15 districts across South Carolina to explore their experiences with the implementation of MTSS. The interviewees identified specific challenges they faced in implementing MTSS at the secondary level. Combined with other challenges reported by researchers, the main barriers to implementing MTSS in secondary schools can be grouped into two categories: logistical and instructional. Logistical challenges center around scheduling, as well as staffing and space. Challenges related to instructional knowledge and resources relate to improving core instruction, identifying effective intervention, and building capacity for implementation (Anderson et al., 2021; Epler, 2019a; Marlowe, 2021).

Figure 1: Main challenges of implementing MTSS in secondary schools



The [MTSS Center](#) at the American Institutes for Research created two documents that can help guide educators in thinking through their school’s unique context and the steps they can take to begin implementing MTSS. These *Considerations for MTSS Implementation* documents consist of one for [middle school settings](#) and one for [high school settings](#). Each asks users to consider several dozen guiding questions, such as considering how the school can leverage existing resources to implement MTSS and what supports teachers may need to deliver instruction for Tiers 1, 2, and 3 (Center on Multi-Tiered System of Supports, 2021).

Strategies to Address Challenges

Participants in interviews conducted by the RC6 in 15 South Carolina districts stressed that they needed secondary MTSS resources that would help them with practical and concrete ideas for implementation. They wanted exemplars and strategies they could apply to their schools' specific context (Anderson et al., 2021). Because of this need, the search for strategies to address the main challenges identified in the preceding section focused on locating case studies and exemplars that offer specific guidance to district and school leaders. This section is organized by strategy, with examples and exemplars in the appendices. While many of these strategies are most useful for schools with an academic focus for MTSS, some may also be applied to other areas, such as behavior or social emotional learning.

Strategy 1: Adjust the master schedule to make time for intervention in the school day

In secondary schools implementing MTSS, the master schedule must ensure that time and space are designated both for intervention and for MTSS team meetings to review data and problem solve, the latter of which should occur weekly to biweekly (Clark and Dockweiler, 2019). Revisions to a master schedule should take into consideration the importance of collaborative planning time for teachers. Staff also need time to analyze data and identify students in need of additional support and the type of support they need (Brundage, Hardcastle, Justice, and Jenkins, 2016).

The [South Carolina MTSS Framework](#) encourages the use of schedules that provide job-embedded opportunities for educators to collaborate and problem solve in settings like School Improvement Team meetings, Leadership Team meetings, Professional Learning Community meetings, Department Content meetings, and Grade Level meetings (South Carolina Department of Education, 2021). As time for these types of meetings is often already built into school schedules, the focus here is on how schools can make time for intervention.

Clark and Dockweiler note that it is not sustainable to expect teachers and students to address intervention needs outside of school hours on a voluntary basis. Making intervention available mostly or only outside of regular school hours may also create barriers to student access, namely transportation. Incorporating intervention into the master schedule in one way or another is “the most systematic way” to ensure that both teachers and students are available for additional support (2019, p. 81).

The master schedule is the administrative commitment to providing time and space for MTSS team functions.

Clark and Dockweiler, 2019

There are a number of ways to create time for targeted intervention support within secondary school schedules. One is to revise the master schedule to create a designated period for learning support. The Massachusetts Department of Elementary and Secondary Education [recommends](#) that school schedules contain a dedicated intervention and/or enrichment block for all students (2020). This block can go by various names, including Flex time, Power Hour, or What I Need (WIN), and is used to provide intervention to students who need it and enrichment activities for those who do not. Some example middle school and high school schedules can be found in Appendix A.

Having a dedicated block for needs-based intervention and enrichment solves several logistical challenges. Since every student is involved in either intervention or enrichment, the school can take advantage of all classrooms and staff. Support staff can assist with intervention to reduce group sizes within a given classroom. At the middle school level, careful scheduling can even make it possible to group students with similar intervention needs across grade levels (Marlowe, 2021). In addition, a permanent block that runs through the entire school year allows for flexible grouping as students move into or out of intervention groups according to their progress and needs (Clark and Dockweiler, 2019).



MTSS in Practice: Intervention/Enrichment and Lunch Block

Half-Time

Batesburg-Lee High School in South Carolina's Lexington County School District Three is a small, rural school with about 560 students. The school divides a 50-minute lunch period into two halves; together, this block is called Half-Time. Students eat lunch during one 25-minute half and receive Tier 2 support as needed during the other half from teachers, who hold office hours on specific days of the week. Batesburg-Lee's High School's schedule can be found in Appendix A.



Power Hour

In 2014 the principal of West Port High School in Ocala, Florida described how his school used the transition time involved in holding three separate lunches, plus five extra minutes before and after school, to create a "Power Hour." During this hour-long period, all of the school's 2,000 students and its teachers ate lunch and participated in their choice of activities, from making up work to taking extra online courses, forming AP study sessions, and engaging in cocurricular activities. By the end of the first school year with this Power Hour, the school's course failure rate dropped from 37% to 3.8%, cocurricular engagement rose from 10% of students to 60%, and the number of disciplinary referrals was cut in half. The principal attributed this rearrangement of time to not only higher performance, but also a more positive school climate (Ellspermann, 2014).

Note: A 50-minute period called ALPHA Time has replaced Power Hour in the school's current schedule, but the function is the same. A 29-minute School Improvement Time has also been added to the schedule on Thursdays and Fridays. West Port High School's current schedule can be found in Appendix A.

Other ways to provide a consistent time for intervention during the school day include the following:

- Learning labs held as electives or during lunch for reteaching and support in completing work, retaking assessments, and/or study skills.
- Providing a focused lunch period where students eat while receiving tutoring and support.
- Using homeroom time for academic support and behavioral and/or social emotional instruction.
- Using elective time—some students are scheduled for a double block of core instruction (sometimes called "double dosing") or report for intervention in place of an elective class.

- Partitioning instructional time within long class blocks to include both instruction and intervention. This might consist of direct instruction for all students, a quick formative assessment, and targeted reteaching and support for identified students while the rest of the class completes extension activities.

MTSS in Practice: Partitioning Instructional Time to Include Intervention



Below is an example of how teachers might set aside time for small group intervention in a 70-minute block.

5 minutes	Bell work on the current learning target as students settle into class
33 minutes	Direct instruction for all students
5 minutes	Formative assessment
7 minutes	Teacher reviews formative assessments and identifies those who mastered learning targets and those who need reteaching, as well as specific concepts for reteaching.
20 minutes	Reteach identified concepts to students not meeting learning targets on the formative assessment. Students who met learning targets work on an interdisciplinary stretch project, collaboratively or independently.

Adapted from Brundage, Hardcastle, Justice, and Jenkins (2016), page 40.

Leaders seeking to make time for intervention should be aware that some solutions bring unintended consequences. For example, using non-credit-bearing elective intervention courses to provide intervention to high school students can impact those students' ability to earn the credits necessary to graduate on time. Using an elective course to provide time for intervention could also keep students from being able to take CTE or dual-enrollment courses that could help them graduate with valuable job skills or postsecondary credits.

Strategy 2: Create an MTSS team and carefully select intervention teachers

However, intervention is scheduled, administrators need to take care when selecting the appropriate personnel to teach students with academic needs. The most experienced teachers in the school tend to be the most effective intervention teachers, but less experienced teachers who are committed to learning about their students and the challenges they face both in and out of school may also be good choices. Clark and Dockenweiler write that the best intervention teachers are those who "are willing to get to know their students and differentiate their teaching based on student need" (2019, p. 85). In schools where many students need intervention in reading or math, administrators may also want to identify social studies, science, or elective teachers who have the knowledge and skills needed to provide intervention in reading and math even though that is not their assigned content area.

MTSS implementation is not just the responsibility of the teachers who provide intervention. The research on MTSS in secondary schools suggests that the whole school needs to be involved in implementation efforts (Fisher & Frey, 2011). Departmentalization in high schools can be countered by

MTSS in Practice: MTSS Teams and Staff Roles



At Kingstree Magnet Middle School in Williamsburg County Schools, the MTSS team consists of the principal, assistant principal, guidance counselor, instructional coach, and teachers. The instructional coach leads the MTSS team.

At Berkeley County High School in Berkeley County Schools, the MTSS team includes administrators, the academic coach, the Title I coordinator, lead teachers for content areas, and a representative from CTE courses. Prior to COVID, every teacher was assigned 10-12 students to mentor from freshman year until graduation. The mentor's responsibilities included reviewing the students' report cards, making sure the student was on schedule to graduate, and serving as a touchpoint for support. Mentors met with each mentee about every two weeks and played a key role in providing Tier 1 SEL support.

building a mindset that every student is the responsibility of every teacher and helping staff take ownership of the continuous improvement process (Marlowe, 2021). Every staff member needs to have a clear vision of the school's MTSS model and be willing to put the necessary time and effort into implementing it (Epler, 2019b).

Each school implementing MTSS should establish a team to guide and champion MTSS efforts. Clark and Dockweiler suggest that "each MTSS team member has specific responsibilities that contribute to the team's success, and these unique roles each complement one another" (2019, p. 94). In the case manager model they propose, the team might be composed of an administrator, MTSS case manager(s), MTSS chair (and in some cases, co-chair), school counselors, school psychologist, specialists, and teachers, all of whom divide and share the responsibilities of managing the MTSS process.

In this model, specific educators—often one or more per grade level, depending on the size of the school—represent a designated group of students and are responsible for learning those students' histories, collecting and presenting data on their needs and progress at meetings, and communicating with intervention teachers and parents. The authors write that this model can be very successful in secondary schools because "it creates a focal point in the storm of fast-moving information for student data, observations, and recommendations to be gathered, discussed, and disseminated" (p. 96). One or more MTSS chairs, usually an administrator or other non-instructional staff member with scheduling flexibility, oversee the overall MTSS process and are in charge of MTSS meetings and communications.

While having at least one MTSS team in a school is important for dividing responsibilities and facilitating the MTSS process, schools may choose to instead form several different teams that have more specific functions. Different sources suggest organizing these teams in slightly different ways, but there tend to be some commonalities in each team's purpose and suggested membership, as shown in Figure 2. Note that while Figure 2 reflects suggested team membership from several different sources—the [North Carolina Department of Public Instruction](#) (2022), [Broward County Schools](#) (2018), [Brevard County Schools](#) (2022), and [Porter \(2022\)](#)—the best members for a given school team will vary depending on each school's context and organization.

Figure 2: A Starting Place for Suggested School Teaming Structures

Team	School Leadership Team	Data Team/Collaborative Problem-Solving Team	Individual Problem-Solving Team
Membership	<ul style="list-style-type: none"> Administrator Teacher leaders General ed teachers Special ed teachers Content experts Student support personnel 	<ul style="list-style-type: none"> Administrator Department or grade level teachers As needed: special ed teachers, student support personnel 	<ul style="list-style-type: none"> General ed teachers Content experts/coaches Personnel with specialized knowledge Special ed teachers as needed
Function	School-wide problem solving and MTSS implementation; examines effectiveness of all tiers	Matches students to supplemental interventions; determines intervention effectiveness	Intensive problem-solving at individual student level: determine, implement, and monitor intervention

For additional guidance on and support for creating an MTSS team, Appendix B of the [South Carolina MTSS Framework and Guidance](#) document contains a rubric arranged by staff role for assessing MTSS implementation. The Massachusetts Department of Elementary and Secondary Education provides a [Staffing Needs Assessment](#) document to help school leaders examine their staffing levels and schedules and identify how staffing levels and assignments may be affecting student outcomes.

Strategy 3: Strengthen core instruction to reduce the need for intervention

Before focusing on academic intervention, consider that it is impossible for a school to provide Tier 2 or 3 intervention to a majority of students. Evidence-based core/Tier 1 instruction is the foundation upon which an effective MTSS process is built. As Clark and Dockweiler put it, “if the base of the building is unstable then nothing built on top is going to be stable either” (2019, p. 248).

Figure 3: Instructional Approaches for Struggling Students

Instructional approaches that produce better outcomes for struggling students

- Include modeling and repetition
- Are explicit, structured, and systematic
- Provide guided and controlled opportunities to practice
- Scaffold learning supports
- Include corrective and immediate feedback

MTSS has the potential to illuminate areas in which core instruction can be improved. Several district leaders interviewed as part of an examination of MTSS implementation in South Carolina realized their schools were struggling to provide consistent and high-quality Tier 1 instruction when implementing MTSS revealed that large proportions of students required Tier 2 or Tier 3 intervention (Anderson, et al., 2021). Research clearly points to specific

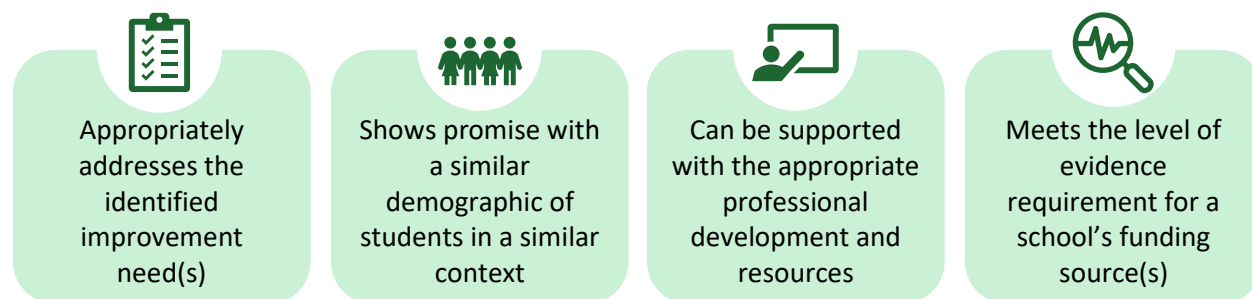
instructional approaches that are effective for all students and yield significant outcomes for students who need more support. Callender (2014) summarizes some of these “fixes” for core instruction in secondary schools (see Figure 3).

In general, schools seeking to implement MTSS should assess the quality and effectiveness of their Tier 1 instruction—curricula *and* teaching strategies—in addition to searching for effective Tier 2 and 3 interventions. Reputable sources for curriculum reviews include [EdReports.org](https://edreports.org) and the Louisiana Department of Education’s [Instructional Materials Reviews](#). Improving core instruction helps reduce the number of students who require intervention. This, in turn, increases the capacity of the school to provide extra support to those who need it.

Strategy 4: Select evidence-based intervention strategies or programs

When considering academic intervention strategies or programs, the SCDE advises in [Using Evidence Based Interventions & Practices: A Process Guide for Improvement](#) (2019) that districts ensure an intervention meets four main criteria, as shown in Figure 4.

Figure 4: Four main criteria for interventions



For academic interventions, Callender recommends looking for ways to provide explicit, systematic instruction in specific “well-recognized” dimensions of reading and math. These dimensions can be found in Appendix C. Schools will also need to keep in mind specific requirements for the use of funds when identifying appropriate interventions, as some funding sources require the use of interventions that demonstrate promising, moderate, or strong evidence that they improve outcomes. The tiers of evidence were determined by the Every Student Succeeds Act of 2015 (ESSA) and are summarized in [a 2-page document](#) from REL Midwest.

There are several key sources of information about intervention programs; all review and compile the evidence on their effectiveness. Three key sources are described in Table 1. Evidence for ESSA identifies the ESSA evidence tier of an intervention, and the information provided on the What Works Clearinghouse (WWC) website can be used to determine a tier of evidence [using guidance provided by the WWC](#). SCDE’s [Using Evidence Based Interventions & Practices: A Process Guide for Improvement](#) has a list with additional sources (p. 30).

The information found on any one of these three key sites—let alone several of them combined—is a lot for school staff to wade through. These resources might provide the greatest benefit to schools if state- and/or district-level leaders review the information and data available and provide more targeted information to school leaders, or even a curated list of suggested interventions.

Table 1: Three key resources for information about intervention programs

Source	Link	Description
Evidence for ESSA	https://www.evidenceforessa.org/	Search for and sort programs by topic, grade band, and a variety of other characteristics.
What Works Clearinghouse	https://ies.ed.gov/ncee/wwc/	Sorts programs by categories that include academics, behavior, English Learners, and Path to Graduation.
National Center on Intensive Intervention	https://intensiveintervention.org/tools-charts/overview	Provides tool charts for academic and behavior screening, progress monitoring, and intervention. Sort by subject and grade band.

For students with significant reading difficulties, Fairfax County Public Schools in Virginia has published a detailed table of [specialized literacy programs](#) that are “research-based with embedded evidence-based practices such as explicit, systematic, prescriptive, sequential instruction and the use of multi-sensory techniques” (Fairfax County Public Schools, 2019). The table indicates the grade levels for which a given intervention is designed. For more general academic and behavioral needs, example intervention strategies that can be implemented in each tier can be found in Appendix D.

Strategy 5: Identify and group students who need intervention

Secondary schools may turn to many different sources for data they can use as universal screeners to identify students who need intervention support, including GPA, state or end-of-course exam performance, attendance data, and disciplinary referrals. Some data sources are better predictors of student outcomes than others. A school will need to choose appropriate data sources based on the focus of its MTSS approach. AIR’s College and Career Readiness and Success Center (CCRS Center) has examined the research behind some common ninth grade early warning indicators and outlined the evidence base behind each, and suggested decision rules, or thresholds, for identifying students who need intervention (2017). A chart with this information can be found in Appendix E.

The appropriate cut points for identifying students for academic Tier 2 or 3 intervention will vary by school according to staffing levels and the number of students meeting benchmarks. Some general guidelines are suggested in Figure F1 in Appendix F. In schools with a high number of students in need of support, Tier 3 intervention may be reserved for the bottom 10 percent rather than the bottom 20 percent, or school-based norms may be used rather than national or screener-specific norms. An example of how benchmark data can be used to group students and determine and serve intervention needs can be found in Figure F2 in Appendix F.

Strategy 6: Provide ongoing professional development and supports for MTSS

In schools just starting out with MTSS, professional development on what it is and how to implement it is the first step in building staff capacity (Brundage, Hardcastle, Justice, and Jenkins, 2016). SCDE's [Six Components of MTSS Modules](#) can provide a launching point for these schools. But staff also need more detailed, ongoing professional development covering each step in the MTSS process, including strategies for instruction and intervention (Epler, 2019b; Daye, 2019). Epler conducted a case study of middle and high school RTI implementation and compiled a monthly professional development calendar used by the middle school to introduce RTI and support teachers during the first year of implementation. A modified version of that calendar and a comparison of the two schools' implementation approaches can be found in Appendix G and H respectively.

Because RtI is an ongoing process, professional development about it must be ongoing.

Epler, 2019b

Most secondary teachers are trained in teaching content and may not have much training in specific evidence-based teaching practices. Beyond professional development on MTSS itself, teachers and any other staff members providing academic instruction or intervention may benefit from training to support them in improving overall instruction, including literacy strategies that support students with below-grade-level reading skills across content areas. Training on social and emotional learning (SEL) is also important if that is a focus of MTSS (Daye, 2019). Daye notes that high school teachers often don't recognize their role as SEL instructors. Yet, just like any other MTSS focus, the foundation of SEL support for all students rests in Tier 1.

Strategy 7: Develop or identify structures and resources to support MTSS

A case study of MTSS implementation in a middle school describes an array of MTSS structures, resources, and procedures created by the district MTSS team and distributed in an online resource folder (Marlowe, 2021). As capacity to implement MTSS grows, these types of tools can help support staff and ensure consistency of implementation between teachers and grade levels. The tools included:

- **MTSS protocol documents:** Templates, tier plans, and progress monitoring guidelines.
- **Literacy intervention protocols:** Guidelines for frequency, group size, curriculum, instructional methods, and benchmark scoring.
- **Data decision guide:** Helped teachers understand their student and classroom data and decide on appropriate intervention.
- **Schoolwide data spreadsheet:** Common data management tool for benchmark and progress monitoring data.
- **Professional development:** Courses covering effective practices (generally), Tier 2 and Tier 3 literacy intervention, instructional routines, progress monitoring, benchmarking, and more.
- **On-demand training resources:** Videos and information on implementing core and intervention instruction and understanding assessments.

The development of so many resources in-house may be a lofty goal for smaller or lower-resourced districts. These districts could start by reviewing the resources available from their state and the [MTSS Center](#) and reaching out for assistance if necessary. The North Carolina Department of Public Instruction

maintains [a public repository of MTSS resources and supports](#) that may also be helpful, and other state MTSS implementation guides are available online. While the terms used in MTSS may vary somewhat across states, the overall MTSS process is generally consistent. Pulling resources from a variety of sources can help fill in gaps to create a better overall understanding of implementation requirements and methods.

Summary

While resources about the “nuts and bolts” of implementing MTSS in secondary schools are few and scattered, this brief pulls together some examples of strategies that district and school leaders can add to their toolkits. Since no two schools are alike, each school’s approach to MTSS will be varied. The appendices that follow and sources cited throughout the brief contain an array of additional resources that may prove useful as school leaders take the strategies below and apply them to their specific tool contexts.

Figure 5: Strategies to address the challenges of implementing MTSS in secondary schools

- 1 Adjust the master schedule to create a dedicated period for intervention and enrichment.**
- 2 Create an MTSS team and carefully select intervention teachers.**
- 3 Strengthen core instruction to reduce the need for intervention.**
- 4 Select evidence-based intervention strategies or programs.**
- 5 Identify and group students who need intervention.**
- 6 Provide ongoing professional development and supports for MTSS.**
- 7 Develop or identify structures and resources to support MTSS.**

Appendices

The following appendices contain resources to help secondary schools with the “nuts and bolts” of implementing MTSS. They draw on a variety of sources, from research to educator practice, and are closely focused on MTSS implementation in secondary schools. Their contents are as follows:

Appendix A: Sample Schedules with Intervention/Enrichment Blocks. Six sets of example schedules demonstrate how middle and high schools fit intervention into the school day.

Appendix B: Intervention Delivery. A table and brief accompanying description demonstrate how reading intervention can be delivered and staffed for each of the three tiers of MTSS.

Appendix C: Selecting Interventions. Key dimensions for reading and math intervention and links to resources for information on evidence-based interventions.

Appendix D: Example Intervention Plan. An example of how a high school might use benchmark data to identify and target students’ needs for intervention or enrichment.

Appendix E: Early Warning Indicators and Decision Rules. A list and description of five common ninth grade indicators and suggested thresholds for identifying students who are at risk.

Appendix F: Example Interventions for Each Tier of MTSS. Tables with ideas for academic and behavioral intervention and support strategies that are divided into each tier of MTSS.

Appendix G: Professional Development for MTSS. A monthly professional development calendar used to introduce RTI and build staff capacity in a middle school.

Appendix H: Comparison of RTI Models in Middle and High School. A comparison of RTI models in a middle and high school.

As mentioned in the brief, the [MTSS Center](#) at the American Institutes for Research created two documents that can help guide educators in thinking through their school’s unique context and the action steps they can take to implement MTSS. These *Considerations for MTSS Implementation* documents consist of one for [middle school settings](#) and one for [high school settings](#).

Appendix A: Sample Schedules with Intervention/Enrichment Blocks

As described in the brief above, West Port High School in Ocala, Florida saw impressive improvements in student achievement and engagement after implementing a dedicated period for intervention and enrichment. The school's current schedule is below (West Port High School, 2022). Little information is publicly available about the new Student Improvement Time (SIT) period, but it appears to be a time designated for school events and extracurricular lessons—an example is an activity on finding money for college.

Sample A1: Hybrid high school schedule with six classes and 50-minute lunch and intervention period

Monday – Wednesday

1 st Period	9:12 – 10:05
2 nd Period	10:09 – 11:02
3 rd Period	11:06 – 11:59
ALPHA Time	11:59 – 12:49
4 th Period	12:53 – 1:46
5 th Period	1:50 – 2:43
6 th Period	2:47 – 3:40

Thursdays and Fridays use block scheduling, with periods 1, 3, and 5 on Thursdays and 2, 4, and 6 on Fridays.

1 st /2 nd Period	9:12 – 10:51
3 rd /4 th Period	10:55 – 12:34
ALPHA Time	12:34 – 1:24
SIT Time	1:28 – 1:57
5 th /6 th Period	2:01 – 3:40

Early Release

1 st Period	9:12 – 9:48
2 nd Period	9:52 – 10:28
3 rd Period	10:32 – 11:08
4 th Period	11:12 – 11:48
5 th Period	11:52 – 12:28
6 th Period	12:32 – 1:08
Lunch	1:08 – 1:40

The following two sample schedules and modified descriptions come from the Massachusetts Department of Elementary and Secondary Education's [MTSS Resource: Sample Student Schedules](#).

Sample A2: Block schedule with four lunches and WIN block

In this sample, WIN Block occurs every day for 31 minutes. Courses had to be decreased from 86 minutes to 78 minutes to ensure the time for WIN Block. C Block has a rotating lunch, so some students may begin C block, break for lunch, and complete C block after lunch.

A Block	7:27-8:45 (78 minutes)
WIN Block	8:49-9:20 (31 minutes)
B Block	9:24 – 10:42 (78 minutes)
C Block	10:46-12:28 (78 minutes + 24 min for rotating lunch)
D Block	12:32 - 1:50 pm (78 minutes)

Sample A3: Middle school (grades 5-8) schedule with recess and WIN block

In this model, WIN Block is 40 minutes in grades 5-6 and increases to 50 minutes in grades 7-8. Given that this is a traditional schedule with seven (7) periods a day, classes were reduced from 58 minutes to 50 minutes each. Integrated arts (IA) courses can be scheduled and switched each quarter or semester to offer students multiple experiences.

Period	Length	Time	Grade 5	Grade 6	Grade 7	Grade 8
Period 1	50 min	8:08 - 8:58	CORE	CORE	IA	CORE
Period 2	50 min	8:58 - 9:48	CORE	CORE	CORE	IA
Period 3	50 min	9:48 - 10:38	IA	IA	CORE	CORE
Period 4/Lunch	77 min	10:38 - 11:55	Recess (10:38 - 10:50)	Recess (10:38 - 10:50)	WIN (50 min) (10:38 - 11:28)	WIN (50 min) (10:38 - 11:28)
			Lunch (10:50 - 11:15)	Lunch (10:50 - 11:15)		
			Win (40 min) (11:15 - 11:55)	Win (40 min) (11:15 - 11:55)	Lunch (11:28 - 11:55)	Lunch (11:28 - 11:55)
Period 5	50 min	11:55 - 12:45	CORE	CORE	IA	IA
Period 6	50 min	12:45 - 1:35	CORE	IA	CORE	CORE
Period 7	50 min	1:35 - 2:25	IA	CORE	CORE	CORE

Sample schedules A4 and A5 are from pages 44-50 of a 2016 professional learning session led by staff from the Florida Problem Solving & Response to Intervention Project (Brundage, Hardcastle, Justice, and Jenkins).

Sample A4: Middle school schedule with 35-minute Flex period

This middle school with a population of about 700 students, 94% of whom are economically disadvantaged, created a 35-minute school-wide Flex period following homeroom each day. Students are grouped for intervention or enrichment according to their assessment data. Additional intervention is provided to students who need extra support during a Connections period.

Grade Level	1 st Period	2 nd Period	3 rd Period	4 th Period	5 th Period		6 th Period	7 th Period	8 th Period	9 th Period	10 th Period
6 th Grade Boys	Homeroom 8:30 – 8:45 (15 min)	FLEX 8:48 – 9:23 (35 min)	Core 1 9:26 – 10:21 (55 min)	Core 2 10:23 – 11:18 (55 min)	Conn. 1 11:20 – 12:02 (42 min)		Conn. 2 12:04 – 12:46 (42 min)	Lunch 12:49 – 1:14 (25 min)	Core 3 1:16 – 2:11 (55 min)	Core 4 2:13 – 3:08 (55 min)	Core 5 3:10 – 4:05 (55 min)
6 th Grade Girls	Homeroom 8:30 – 8:45 (15 min)	FLEX 8:48 – 9:23 (35 min)	Core 1 9:26 – 10:21 (55 min)	Core 2 10:23 – 11:18 (55 min)	Conn. 1 11:20 – 12:02 (42 min)		Conn. 2 12:04 – 12:46 (42 min)	Lunch 12:49 – 1:14 (25 min)	Core 3 1:16 – 2:11 (55 min)	Core 4 2:13 – 3:08 (55 min)	Core 5 3:10 – 4:05 (55 min)
7 th Grade Boys	Homeroom 8:30 – 8:45 (15 min)	FLEX 8:48 – 9:23 (35 min)	Core 1 9:26 – 10:21 (55 min)	Core 2 10:23 – 11:18 (55 min)	Lunch 11:20 – 11:38 (18 min)		Core 3 11:41 – 12:40 (59 min)	Core 4 12:43 – 1:38 (55 min)	Core 5 1:41 – 2:36 (55 min)	Conn. 1 2:39 – 3:21 (42 min)	Conn. 2 3:23 – 4:05 (42 min)
7 th Grade Girls	Homeroom 8:30 – 8:45 (15 min)	FLEX 8:48 – 9:23 (35 min)	Core 1 9:26 – 10:21 (55 min)	Core 2 10:23 – 11:18 (55 min)	Core 3 11:21 – 11:35	Lunch: 11:38 – 11:56	Core 3: 11:56 – 12:41	Core 4 12:43 – 1:38 (55 min)	Core 5 1:41 – 2:36 (55 min)	Conn. 1 2:39 – 3:21 (42 min)	Conn. 2 3:23 – 4:05 (42 min)
8 th Grade Boys	Homeroom 8:30 – 8:45 (15 min)	FLEX 8:48 – 9:23 (35 min)	Conn. 1 9:26 – 10:13 (47 min)	Conn. 2 10:17 – 11:04 (47 min)	Core 1 11:07 – 12:13 (66 min)		Lunch 12:15 – 12:40 (25 min)	Core 2 12:42 – 1:48 (66 min)	Core 3 1:50 – 2:56 (66 min)	Core 4 2:58 – 4:05 (67 min)	
8 th Grade Girls	Homeroom 8:30 – 8:45 (15 min)	FLEX 8:48 – 9:23 (35 min)	Conn. 1 9:26 – 10:13 (47 min)	Conn. 2 10:17 – 11:04 (47 min)	Core 1 11:07 – 12:13 (66 min)		Lunch 12:15 – 12:40 (25 min)	Core 2 12:42 – 1:48 (66 min)	Core 3 1:50 – 2:56 (66 min)	Core 4 2:58 – 4:05 (67 min)	
	1 st Period	2 nd Period	3 rd Period	4 th Period	5 th Period	6 th Period	7 th Period	8 th Period	9 th Period	10 th Period	
Connections Teachers	Homeroom 8:30 – 8:45 (15 min)	FLEX 8:48 – 9:23 (35 min)	8 th Conn. 1 9:26 – 10:13 (47 min)	8 th Conn. 2 10:17 – 11:04 (47 min)	Planning 11:04 – 11:20 (16 min)	6 th Conn. 1 11:20 – 12:02 (42 min)	6 th Conn. 2 12:04 – 12:46 (42 min)	Planning 12:46 – 2:39 (88 min)	7 th Conn. 1 2:39 – 3:21 (42 min)	7 th Conn. 2 3:23 – 4:05 (42 min)	

Lunch Duty in Cafeteria (7th)
12:49 – 1:14

Sample A5: High school schedule with seven classes and 54-minute lunch and intervention period

In this school, teachers hold office hours during the first half of the lunch/tutoring block — called “Anchor Hour.” Check-in stations staffed by guidance counselors, administrators, custodial staff, and PE staff were created at the beginning of lunch to monitor student movement. The school added 10 minutes to the school day and reduced the length of class periods to create the additional time.

Period	Regular Schedule	Activity Schedule	Early Release Schedule
1	8:35 – 9:23	8:35 – 9:14	8:35 – 9:12
2	9:28 – 10:16	9:19 – 9:58	9:17 – 9:54
3	10:21 – 11:09	10:03 – 10:42	9:59 – 10:36
4	11:14 – 12:02	10:47 – 11:26	10:41 – 11:18
Anchor Hour	12:02 – 12:56	11:26 – 12:23	11:18 – 12:14
Office Hours A	12:02 – 12:26	11:26 – 11:53	11:18 – 11:44
Office Hours B	12:32 – 12:56	11:56 – 12:23	11:48 – 12:14
5	12:56 – 1:44	12:23 – 1:02	12:14 – 12:51
6	1:49 – 2:37	1:07 – 1:46	12:56 – 1:33
7	2:42 – 3:30	1:51 – 2:30	1:38 – 2:15

Sample A6: High school schedule with four class blocks and 50-minute lunch and intervention block

Batesburg-Leesville High School in South Carolina divides an extended lunch period into two halves; together, this block is called Half-Time. Students eat lunch during one 25-minute half and receive Tier 2 support as needed during the other half from teachers, who hold office hours on specific days of the week.

Teacher Arrival	7:40
1 st Block	8:30 – 9:53
2 nd Block	10:00 – 11:23
Half-Time/Lunch	1 st Half: 11:25 – 11:50
	2 nd Half: 11:50 – 12:15
3 rd Block	12:22 – 1:45
4 th Block	1:52 – 3:15
Teacher Departure	3:30

Appendix B: Intervention Delivery

Jimerson, Burns, and VanDerHyden present a table demonstrating how tiered ELA instruction and support could be designed, staffed, and delivered in a middle school (2016, p. 578). They write:

In this implementation model, tier 2 intervention to below average students would be delivered within the period, circumventing the need for students to miss other classes/courses. Intervention would not simply be reteaching but using carefully selected intervention programs aligned with students' needs. For example, many middle school struggling read[ers] have difficulty with multisyllabic words, vocabulary, and comprehension (Torgesen 2004). A viable solution in this instance could be REWARDS (Archer and Gleason 2001), an intervention program with strengths in these skill areas. Tier 2 intervention would be delivered by language arts teachers. Tier 3 would be targeted to students with severe performance discrepancies in an additional period, using intensive, specially designed curriculum and staffed by special education personnel.

Figure B1: Intervention Delivery Example

Table 5 An option for how tiered reading/language arts services can be delivered

Tier	Program and focus	Staffed by	Amount of time
General education tier 1	Strong, teacher-led, comprehensive language arts program with explicit instruction in comprehending narrative and content textbooks (i.e., <i>Read to Achieve</i>) + novel study strongly biased toward nonfiction	Content-area language arts teachers	Double period or block every day
Tier 2	<i>Read to Achieve</i> , plus more explicit and targeted intervention + (e.g., <i>rewards</i>) + structured outside wide reading	Assigned content-area language arts teachers	Tier 2 delivered within the double period/block
Tier 3 and special education	<i>Read to Achieve</i> + explicit and comprehensive intervention (e.g., <i>REACH</i> or <i>Corrective Reading</i>) + structured outside wide reading	Special education personnel	3 periods

Appendix C: Selecting Interventions

Callender (2014, p. 63) recommends that secondary intervention provide explicit, systematic instruction in the areas of reading and math listed below:

Table C1: Reading and Math Interventions

<i>Reading</i>	<i>Math</i>
Phonics	Number and operations
Decoding	Algebra
Word recognition	Geometry
Spelling	Measurement
Comprehension (listening and reading)	Data analysis and probability
Vocabulary	Problem solving and estimation
Writing	Reasoning and proof
Oral and written communication	Communication
	Connections
	Representation

Resources for Information About Evidence-Based Interventions

Evidence for ESSA: <https://www.evidenceforessa.org/>

What Works Clearinghouse: <https://ies.ed.gov/ncee/wwc/>

National Center on Intensive Intervention

- Academic Intervention Tools Chart: <https://charts.intensiveintervention.org/aintervention>
- Behavioral Intervention Tools Chart: <https://charts.intensiveintervention.org/bintervention>

Appendix D: Example Interventions for Each Tier of MTSS

The tables that follow are adapted from a document created by Guilford Public Schools in Guilford, Connecticut (2018, pp. 11-12). Ideas for academic and behavioral intervention and support strategies are divided into each tier of MTSS. Note that the strategies are additive: Tier 2 includes Tier 1 strategies and Tier 3 includes both Tier 1 and Tier 2.

Table D1: Guilford Public Schools Pyramid of Instruction, Accommodations, and Intervention

Tier 1	
Academic	Behavioral
<ul style="list-style-type: none"> • Strategic seating • Guided study hall (MS/HS) • Orientation to lab/equipment • Extended time/Wait time • Scaffolding • Small group instruction • Flexible grouping • Writers' workshops • Technology integration • Parent communications • Individual feedback • Check/monitor work in progress • Monitor academic performance • File/Record review • Differentiated instructional practices • Student choice • Principles of Learning • Alternate assignments/assessments • Homework/assessment accommodations • Use of calculator • Use of facts tables/formula charts • Use of rubrics 	<ul style="list-style-type: none"> • Team building activities • Clear classroom/school expectations • Team building activities • Clear classroom/school expectations • Behavior management strategies • Discipline policy enforcement • Character education lessons • Parent/guardian communication • Teacher/student conferences • After school clubs/activities • Monitor absences/attendance/discipline log • Planned ignoring (extinction) • File/record review • Minimize transition time • Post daily/weekly schedules (ES/MS) • Organization strategies • Recognition rituals • Positive feedback • Strategic seating











Table D2: Guilford Public Schools Pyramid of Instruction, Accommodations, and Intervention (cont.)

Tier 2	
Academic	Behavioral
<ul style="list-style-type: none"> • Before/after school tutoring • Push-in supports • Multi-sensory reading instruction • Homework/organization club • Academic Labs (HS) • Assistive technology • Peer tutor • Flexible schedule • Books on tape, CD, web-based • Schedule/class change • Title I Summer Programming (ES) • Schedule co-teaching environment 	<ul style="list-style-type: none"> • Conduct observations • Individual conferences • Early/late class dismissal (MS/HS) • Participation in Mentoring program • Lunch groups • Consult related services staff/specialists • Use of hot pass (MS/HS) • Collaboration w/outside agencies • Home visits • Behavior contracts
Tier 3	
Academic	Behavioral
<ul style="list-style-type: none"> • Pull out supports • Supplemental reading/math • More intensive schedule/class change 	<ul style="list-style-type: none"> • Functional Behavior Assessments • Behavior Improvement Plans (BIP)

Appendix E: Early Warning Indicators and Decision Rules

In 2017 the College and Career Readiness and Success Center at American Institutes for Research examined the evidence base behind five common early warning indicators used to identify students in need of intervention. These indicators are “highly predictive of student outcomes, such as on-time high school graduation” (p. 2). Thresholds for identifying students as “at risk” are also included below.

Table F1: Frequently Used Ninth-Grade Indicators and Thresholds

Ninth-Grade Indicators	Description	Threshold	Evidence-Based Rating
 <p>First 20- or 30-day attendance (Allensworth & Easton, 2007)</p>	The number of absences within the first 20 or 30 days of each grading period is the biggest risk factor for failing ninth grade (Neild & Balfanz, 2006). This indicator is particularly important because the data are available early in the school year, allowing for timely intervention.	Missed 10% or more of instructional time	 <p>PROMISING EVIDENCE</p>
 <p>Attendance (Allensworth & Easton, 2005, 2007)</p>	Attendance is a frequently used indicator because attendance during the first year of high school is directly related to high school completion rates (Heppen & Theriault, 2008).	Missed 10% or more of instructional time	 <p>STRONG EVIDENCE</p>
 <p>Course failures (Allensworth & Easton, 2007)</p>	This indicator applies to failures in any subject, not just the core content areas (English, mathematics, science, or social studies). This indicator is strongly related to the next indicator, grade point average (GPA).	Failed one or more courses per grading period	 <p>STRONG EVIDENCE</p>
 <p>GPA (Allensworth & Easton, 2007)</p>	If using a 4.00 GPA (rather than a weighted average) as the norm, students are considered off-track if they have a GPA of 2.00 or lower following each grading period and at the end of the year. This calculation includes all credit-bearing classes.	2.00 (less than half the maximum attainable GPA)	 <p>STRONG EVIDENCE</p>
 <p>On-track indicator (Allensworth & Easton, 2007)</p>	This composite indicator is the minimal expected level of student performance (Allensworth & Easton, 2007). To be considered on-track, a student must have accumulated enough credits for promotion to the next grade and have no more than one failing grade in a core subject (English, mathematics, science, or social studies) by the end of the school year.	Either two or more core course failures or a failure to earn enough credits to be promoted to the next grade	 <p>STRONG EVIDENCE</p>

Appendix F: Example Intervention Plan

Callender provides general guidance on decision rules for determining which students should receive Tier 1, Tier 2, or Tier 3 instruction and intervention (2014, p. 66). Callendar also provides an example of how a high school might use benchmark data to identify and target students' needs for intervention or enrichment.

Figure F1: General guidance on decision rules for Tier 1, Tier 2, and Tier 3

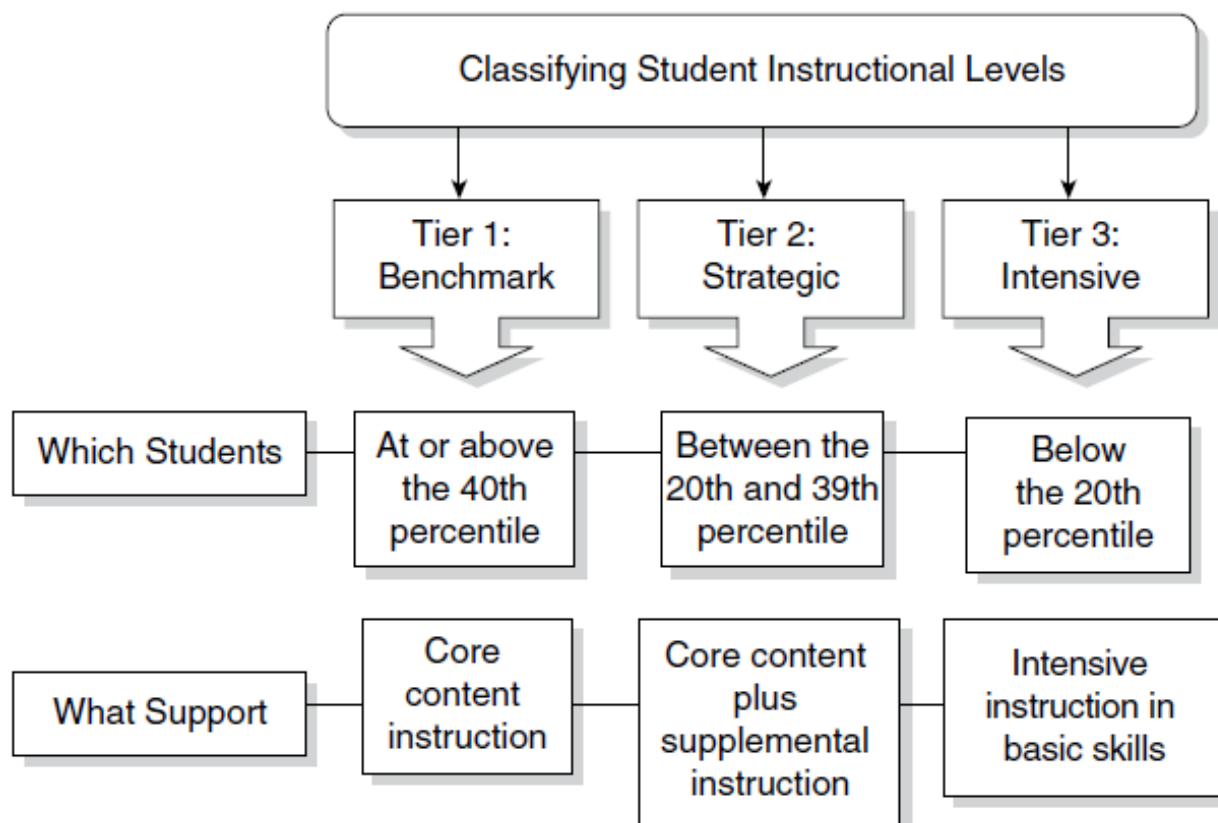


Figure F2: Sample use of benchmark data

Example High School Reading Placement Pathway Plan

Screening	New students and those below 40th percentile on MAP receive AIMSweb (R-CBM & Maze)					
Grade-Level Assessments	Tier III INTENSIVE Below 10th Percentile on AIMS		Tier II STRATEGIC 11th–30th Percentile on the R-CBM and/or Maze		Tier I BENCHMARK 31st–70th Percentile 41% - 70%ile	Tier I ADVANCED 71st–99th Percentile
Diagnosis: Criteria	At or Below 10th percentile on R-CBM and or Maze	Strategic level reading skills (11th–30th percentile) Fusion placement test			MAP, R-CBM, Maze and/or Easy CBM Fast & Right	MAP, R-CBM, Maze and/or Easy CBM Demonstrates the need for additional challenge and advancement Fast & Right
	↓	↓	↓	↓	↓	↓
Focus	COMPREHENSIVE	PHONICS	FLUENCY	COMPREHENSION	CORE CONTENT	ENRICHMENTS
Focus Skills	<u>Basic reading skills:</u> Letter/sound correspondence, decoding, fluency, vocabulary, comprehension	Targeted decoding skills	Automatically decoding words, reading high frequency, and phrasing sentences	Comprehension Skills and/or Strategies	Core coursework	Advanced Content Focus Comprehension Strategies Writing
Intervention	<u>Core Replacement:</u> CORRECTIVE READING Decoding A, B1, B2, or C Comprehension A, B, or C or REACH HIGHER	Fusion Reading or Read to Achieve (Taught by a regular LA teacher) Followed by Read to Achieve (must complete Fusion Reading first)			Regular Core Class	Honors Classes AP Classes Dual Credit Classes
Length of Time	2 Class Periods/day (In place of regular LAs)	1 Class Period/day in addition to a Regular LA. class Semester/Year			Semester/Year	Semester/Year
Verify Progress	Program assessments AIMS	Program assessments AIMS R-CBM and/or Maze			*Performance in Core coursework *Assessments *Grades	*Classroom performance *Rubrics on projects *Grades
Identify Method to Verify Effectiveness	*Percentage of students making adequate progress on AIMS in each support category					

Appendix G: Professional Development for MTSS

In a case study of a middle and high school implementing RTI, Epler shared the monthly professional development calendar used to introduce RTI and build staff capacity (2019b). The following year, all topics were covered at staff meetings at the beginning of the school year and were then discussed again as needed throughout the year.

The professional development calendar from Epler has been modified below to reflect a focus on MTSS, not just RTI (p. 243).

Table G1: Sample Professional Development Calendar for MTSS Introduction

Month	Workshop Focus
September	Benefits of MTSS
October	Tier 1 implementation in the general education classroom
November	Tier 2
December	Tier 3
January	Websites and other RTI resources; research-based instructional strategies for implementation within tiers
February	Process of moving from one tier to another
March	Data collection/progress monitoring
April	Data collection/progress monitoring (cont.)
May	Fidelity of implementation

Appendix H: Comparison of RTI Models in Middle and High School

A case study conducted by Epler resulted in the following comparison of RTI models in each of the schools included in the study (2009b, p. 251). This comparison is not an endorsement of either model, but its contents and the contrast between school levels may be helpful to districts seeking to support MTSS implementation in secondary schools.

Table H1: Middle and High School RTI Model Comparison

	Middle School	High School
Number of Tiers	4	4
Diagnostic Practices	<ul style="list-style-type: none"> • Teacher Recommendations • Report Cards • State Assessments 	<ul style="list-style-type: none"> • Teacher Recommendations • Report Cards • State Assessments • Department-Made Assessments
Data Collection Methods	<ul style="list-style-type: none"> • State Assessments • Teacher-Made Assessments • Report Cards • Intervention Central Website Methods 	<ul style="list-style-type: none"> • Teacher-Made Assessments • Informal Reading Inventories (e.g., Roe & Burns, 2006) • Research-Based Assessments (e.g., Rasinski & Padak, 2005)
Intervention Strategies* Tier 1 Tier 2 Tier 3	<ul style="list-style-type: none"> • Questioning Techniques • Small Group Collaboration • Chunking of Material • Informal Assessments (e.g., exit passes and check points) • Study Skills Course • Reading Classes • One-on-One Tutoring • Credit Recovery Program 	<ul style="list-style-type: none"> • Marzano et al.'s (2001) Instructional Strategies • Summarizing • Note-Taking • Graphic Organizers • APR • Collaboration • Literature Circles • Greek and Latin Roots
Administrative Support	Yes/Sometimes	Yes
Professional Development	Monthly/Ongoing	Infrequent/Sporadic

*Note that in the schools studied, Tier 4 represents special education; strategies for Tier 4 are not included here.

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