Tiered Service Delivery at Sunny Days Elementary
A Case Study of Third Grade Math and Behavior Interventions

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Math & Behavior Case Study within a Tiered Service Delivery Model

The purpose of this case study is to highlight how a model of tiered service delivery supports the general and specific learning needs of children. This example uses a three-tiered model in which Tier 1 represents the core curriculum, Tier 2 represents specific interventions for both academic and behavioral needs, and Tier 3 represents individualized supports and special education. This case study is centered around a hypothetical third-grade classroom within a K-5 elementary school that has implemented a comprehensive Tiered Service delivery model incorporating response to intervention (RTI) for academics and positive behavioral interventions and supports (PBIS) for behavior. First, a very brief overview of tiered service delivery is presented, followed by an introduction to Sunny Days school, and the third grade class (with a specific focus on mathematics). The remainder of the case study illustrates how a system of Tier 2 interventions can be delivered to support students with academic and behavioral needs. In this case study, we do not go into detail about Tier 3 supports.

Throughout the text, readers are queried to assess their comprehension of material covered and reflect on the concepts presented.

Overview of Tiered Service Delivery

The number of levels in multi-level prevention systems varies from model to model. In this case study, the most widely researched three-level model is used. Tier 1 takes place in the general education classroom under the auspices of the general education teacher. Tier 1 consists of an effective research-based curriculum that is faithfully implemented in the classroom. Tier 1 also includes schoolwide behavior expectations, acknowledgements for appropriate behavior and systems for responding to challenging behavior that are consistent across all staff and every setting of the school day. All students are screened at the beginning, middle and end of the year to determine which students are suspected to be at-risk for academic or behavioral failure.

Sunny Days school uses a "direct route" to intervention, in which students whose screening performance falls below a specific cut point are targeted to receive a Tier 2 intervention. So, once fall screening data is collected and evaluated, students are identified for placement in a Tier 2 intervention that supports their specific learning or behavior needs. Students may also be identified for behavioral intervention throughout the year based on office discipline referrals or a request for assistance from their teacher.

Tier 2 intervention involves small-group intervention using a research-based intervention. For behavior, small-group may be defined as a group of students receiving a similar intervention but not necessarily meeting together in a group. Student progress within the interventions is monitored frequently (daily for behavior, weekly for academics) and reviewed at the bi-weekly Tier 2 meeting.

Students who complete Tier 2 at a satisfactory level and whose progress during Tier 2, as evidenced by the ongoing progress monitoring, are deemed as "responsive," move back into Tier 1 only. Students who are making progress but have not yet met their performance targets remain in Tier 2. Students who are "unresponsive" (i.e., who do not achieve at an adequate final

performance level or do not progress adequately during Tier 2) are in need of either an instruction change, or more intensive support. These students either have a change to their intervention or are referred for a more comprehensive evaluation to determine the extent and nature of their learning problems and to help with individual program planning.

In summary, a typical procedure in this school is the following:

1. All students in a class, school, or district are screened three times per year to identify students most at-risk for academic and/or behavior difficulties. Student office discipline referrals are also monitored monthly in addition to teacher requests for assistance to identify additional students who may benefit from behavioral intervention.

2. The Tier 2 team reviews results and makes decisions about which students require interventions based on their screening and referral data.

3. For the at-risk students, research-validated intervention is implemented. Student progress is monitored throughout, and upon completion of, the intervention.

4. Students who do not respond to the intervention, as indicated by (a) not completing intervention at a satisfactory level, and (b) not progressing during intervention, are referred for a comprehensive evaluation to determine special education eligibility and/or appropriate individualized interventions.

5. If the evaluation team determines the student does have a disability, that student receives special education services. It should be noted that once a student is identified as eligible for special education, an IEP is developed and special education service is provided consistent with that IEP. Progress monitoring continues to determine the student's progress toward meeting annual goals. If the student does not appear to be making adequate progress, then the IEP team should meet to determine whether changes are needed. In some cases, students may receive individualized behavior support services without meeting special education eligibility.

Tiered Service Delivery at Sunny Days School

Sunny Days school has an integrated tiered service model that focuses on both academics and behavior. The school has developed and implemented schoolwide expectations for behavior, as well as systems for (a) acknowledging these behaviors, and (b) responding consistently to challenging behaviors. For their RTI system they are working on getting more instructional consistency across classrooms in reading, math and writing to ensure that most students are able to perform at grade level with no additional supports. The general procedures followed under this combined tiered-service model include the following:

1. All students in the school are benchmarked in the fall, winter and spring in reading, writing, math and behavior to identify students postentially at-risk for problems in any of

these areas as well as to determine the efficacy of the core program. Office discipline referral data is monitored monthly throughout the year to identify additional students who may benefit from behavior intervention as well as to monitor the efficacy of the core program.

2. Students identified by these benchmarks or by teacher request for assistance as in need of additional support are brought to the attention of the school's Tier 2 team. In addition to the benchmark data, additional information such as teacher input, classroom performance and other assessment data is reviewed to determine if the student requires a Tier 2 intervention.

3. For students identified as in need of intervention, the following intervention programs are in place:
   a. Behavior – Check-in, Check-out (CICO)
   b. Reading – Combination of fluency, decoding and vocabulary strategies
   c. Writing – Self-regulated Strategy development (SRSD)
   d. Mathematics – V-math

4. Interventions for academics are delivered in small groups (no more than 10) and for behavior are embedded throughout the typical school day. Student progress is monitored on a schedule consistent with their specific needs. The following tools are used to monitor progress:
   a. Behavior – Percentage of daily points earned
   b. Reading – ORF (AIMSWEB); LSF for kindergarten
   c. Writing - TWW (AIMSWEB)
   d. Math – MBSP Concepts & Applications; MBSP Computation (Grade 1)

5. Students who do not respond to Tier 2, as indicated by (a) not completing Tier 2 at a satisfactory level, and (b) not progressing during Tier 2, as evidenced by progress monitoring, are brought to the attention of the Tier 2 team and considered for a comprehensive evaluation.

Another way to understand how students move through the multi-level prevention system is by the flow chart in Figure 1. If the answer is "yes" for Step 1, the student moves to Step 2. Step 2 assesses student response in the general education program. If the answer is "yes" then the student moves to Step 3. Step 3 assesses student response to more intense levels of intervention. If the answer is "yes" then the student is referred for an evaluation to determine the nature of the child's learning difficulty.
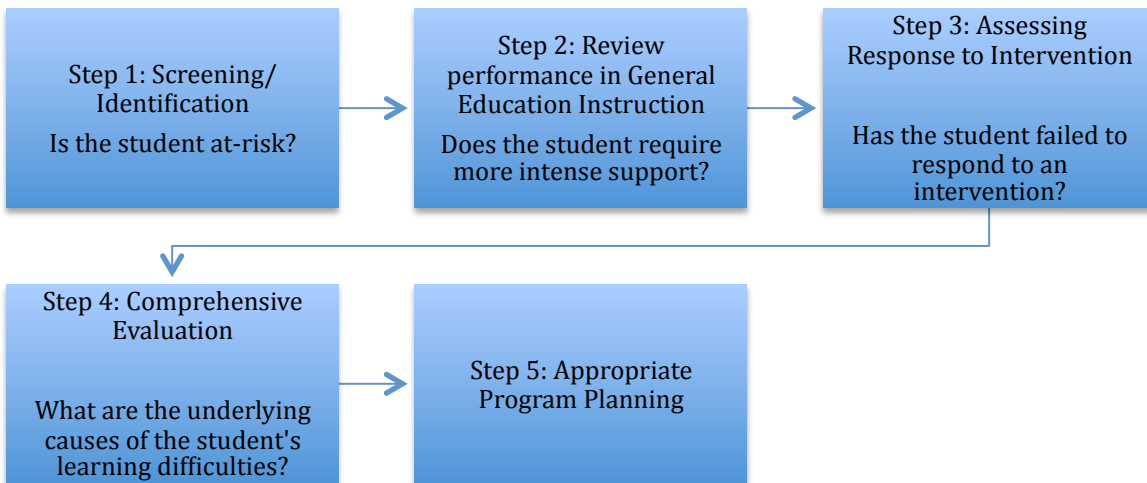
Step 1: Screening/ Identification

Is the student at-risk?

Step 2: Review performance in General Education Instruction

Does the student require more intense support?

Step 3: Assessing Response to Intervention

Has the student failed to respond to an intervention?

Step 4: Comprehensive Evaluation

What are the underlying causes of the student's learning difficulties?

Step 5: Appropriate Program Planning

Figure 1. Flowchart of the Tiered Service decision making process.

Tiered Service Delivery Integrates Instruction and Assessment

The integration of assessment, instruction and intervention is the critical aspect of the tiered service delivery model. Screening measures allow for early identification of potential difficulties, and progress monitoring provides an indication of whether the instructional decisions made for the student are supporting his/her growth.

In this case study, screening is operationalized through the use of brief measures in reading, writing, math and behavior. Pre-determined cut scores are used to decide which students require further monitoring/decision-making and/or placement in an intervention program.

PM is applied to both behavior and academics. Teachers assess students' performance using brief measures that are plotted to allow for a visual analysis of performance compared to a predetermined goal. PM takes place frequently, with the schedule for PM dictated by the nature of the intervention.

For example, in Sunny Days school, PM for behavior takes place daily, whereas PM in the academic areas takes place weekly. In this case study, PM is operationalized through the use of curriculum-based measurement (CBM). PM using CBM tools is implemented through the following process:

1. CBM benchmarks are used for screening and identifying students suspected to be at-risk for poor outcomes.

2. Students who then receive instruction/support through Tier 2 have their progress monitored on a specified schedule (e.g. daily/weekly).

3. PM data is charted to display a student's trendline, goal line, and instructional decisions to facilitate visual analysis of student performance.

4. CBM slope and performance level are used to determine the student's response to more intense intervention.

Introduction to Sunny Days Elementary School

Demographics.

Sunny Days Elementary has 349 students in grades K through 5. The pie charts below show the breakdown of demographic information.
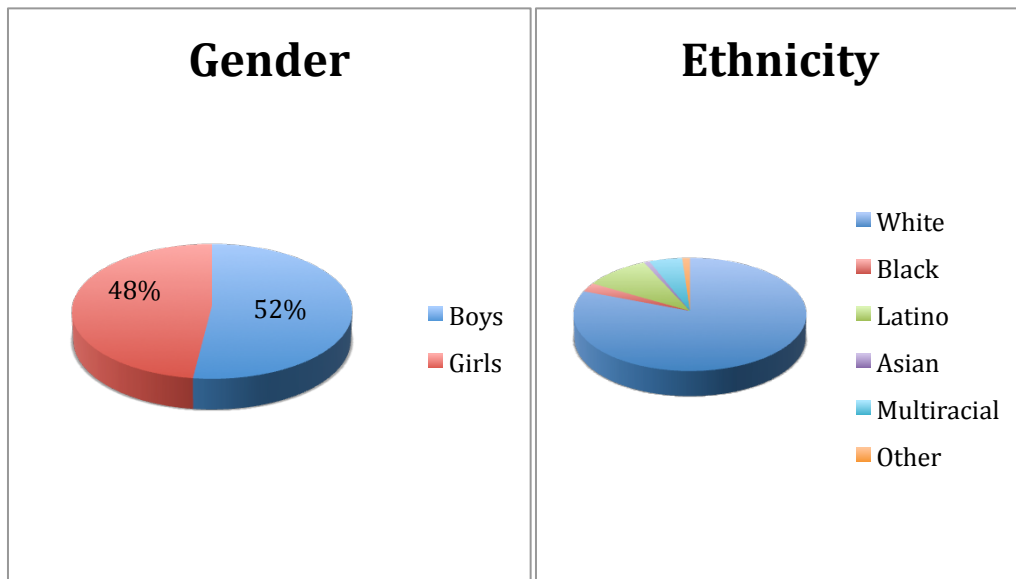
Figure 2. Demographics at Sunny Days Elementary School.

Instructional Programs Used.
The school uses the following curricular materials for each of the various content areas:

Table 1. Instructional programs in use at Sunny Days Elementary

Content Area	Curriculum Name	Benchmark Assessment	Summative Assessment
Reading	Harcourt Trophies	TOSREC	State Reading
Math	Scott Foresman	MBSP Concepts & Applications	State Math
Writing	Step Up to Writing	Total Words Written	State Language Usage

Schoolwide Positive Behavioral Interventions and Supports (SWPBIS).
Sunny Days uses a School-Wide PBIS model. More information about SWPBIS can be found at http://www.pbis.org. According to the definition on this website, SWPBIS is decision making framework that guides the selection and implementation of the best evidence-based academic and behavioral practices for improving outcomes for all students. As part of the implementation process, the school developed common, schoolwide behavior expectations as well as systems for (a) acknowledging when students meet expectations, and (b) responding consistently when problem behavior occurs. The behavioral expectations for Sunny Days Elementary are included in the matrix in Table 2.

In order to ensure that students and teachers have common understandings of these expectations, these behaviors are further defined across common school settings by the behavior matrix developed by Sunny Days staff:

Table 2. Behavior matrix defining schoolwide expectations across settings at Sunny Days.

Expectations	Hallway	Bathroom	Playground	Lunch	Going Home	Assemblies
Be Respectful	Hands to self Voices off Eyes forward	Use quiet voices Stay in personal space	Show kindness in words and actions	Indoor voices Eat your own food Good manners	Quiet voices Kind words	Show good listening skills: Voices off Eyes on speaker Face speaker
Be Responsible	Always have a hall pass Go and return quickly	Flush toilet Wash hands Throw paper in the trash can	In line, on time Equipment in hands Return equipment	Clean up Return lunchbox Eat what you take	Be prompt Line up at your own line	Use brain gym strategies when you feel wiggly
Be Cooperative	Walk on right side of hall Wait your turn	Wait your turn Bathroom needs only	Agree on and follow game rules	Leave it neater than you found it Put trays away	Listen to duty teachers	Stay in your own personal space
Be Safe	Walk Shoelaces tied	Report floods/leaks to adult	Make choices that keep you and others safe Run only on the grass	Watch where you are walking Put trays away	Hands, feet, other objects to self Walk	Criss-cross applesauce Pockets on the floor

Systems.

In order to implement the Tiered Model, the school created three functional teams: 1) Tier 1 Team (school-wide team), 2) Tier 2 Intervention Support Team (progress monitoring team), and 3) Tier 3 Student-Focused Team. The structure, function, and responsibilities of each team are listed below.

1. Tier 1 Team

A. Structure and functions. In order to effectively implement tiered service for academics and behavior, a leadership team was designated. The Tier 1 team consists of the principal, school psychologist, special education teacher, general education teachers and a Title 1 program teacher. The team has two primary purposes:

1. To systematically review screening, school and classroom performance data to determine overall areas of need for school improvement.
2. To guide action planning and implementation of school-wide, universal practices and systems.

B. Roles and responsibilities. In order for the team to function effectively, the following roles and responsibilities were fulfilled by members of the team:

1. Meeting recorder –takes notes during meetings and sends minutes within 24 hours.
2. Data coordinator, academics – brings benchmark data ready to review, teacher observation data, fidelity data and information about professional development needs.
3. Data coordinator, behavior – brings ODR data ready to review, fidelity data and information about professional development needs.
4. Team leader – creates and distributes the agenda, runs the meeting, ensures all agenda items are addressed. Responsible for communicating information to school staff.
5. Team 2 Intervention Support Team liaison – communicates to Tier 2 team the students who will receive Tier 2 interventions based on screening/benchmark data/progress-monitoring of student performance in Tier 1.

C. Meetings. Tier 1 meetings are held every other week for one hour. The general agenda for Tier 1 meetings is included in the appendix. The team leader ensures that this agenda is followed.

D.Communication. Communication with the rest of the school staff is critical in order for the school to understand the process and to be active participants in implementing the schoolwide system. Communication about the Tier 1 process is conducted through the following channels:

a. The meeting recorder distributes minutes to the school staff within 24 hours.
b. The appropriate representative from the Tier 1 team provides updates at grade/department level team meetings.
c. The Team Leader provides updates at whole-staff meetings.
d. Following screening benchmarks, the Tier 2 Liaison provides information about the results to the Tier 2 team.

2. Tier 2 Intervention Support Team

A. Structure and functions. The Tier 2 intervention support team consists of a team made up of the principal, school psychologist, special education teacher, general education teachers and Title 1 program teacher. The Tier 2 team has two primary purposes:

1. To select appropriate interventions for students who require Tier 2 supports.
2. To review progress monitoring data for students receiving Tier 2 supports and make decisions about program modifications.

B. Roles and responsibilities. In order for the team to function effectively, the following roles and responsibilities were fulfilled by members of the team:

- Meeting recorder –takes notes during meetings and sends minutes within 24 hours.
- Data coordinator, academics – a) reviews graphs before meeting, b) completes data summary prior to meetings, c) brings PM data ready to review and d) informs teachers of progress of students receiving interventions.
- Data coordinator, behavior – a) reviews graphs before meeting, b) completes data summary prior to meetings c) brings PM data ready to review and d) informs teachers of progress of students receiving interventions.
- Team leader – creates and distributes the agenda, runs the meeting, ensures all agenda items are addressed. Responsible for communicating information to school staff.
- Tier 2 coordinator – coordinates programming and scheduling.

C. Meetings. Tier 2 meetings are held every other week for one hour (alternate weeks from the Tier 1 meetings). The general agenda for Tier 2 meetings is included in the appendix. The team leader ensures that this agenda is followed.

D. Communication. Communication with the rest of the school staff is critical in order for the school to understand the process and to be active participants in implementing the schoolwide system. Communication about the Tier 2 Intervention Supports is conducted through the following channels:

- The meeting recorder sends minutes to the school staff.
- Relevant representatives discuss information at grade/department level team meetings.
- Team leader provides updates at whole staff meetings.
- Tier 1 and Tier 2 liaisons communicate across team meetings.

Introduction to Mrs. Smith's Third Grade Math Class

Mrs. Smith has a class of 25 students, 3 of whom receive special education services but are included in the general class instruction for math. Mrs. Smith is a second year teacher who uses Scott Foresman as her primary math curriculum. Her fall screening data in math and behavior looked like the following:

Table 3. Mrs. Smith's fall screening data for math and behavior

Student	Math 1	Math 2	Mean	Behavior Risk?
Ally	16	13		
Bob	15	15		
Chris	23	30		YES
Dimitri	12	16		
Davis	17	15		
Eveline	17	20		
Francesca	4	8		
Hermione	11	13		
Horge	32	34		
Jackson	15	13		
Jamie	11	8		
Kristine	31	26		
Leo	17	15		
Mason	6	6		
Megan	29	25		
Mortimer	14	14		
Neil	10	16		
Olivia	14	19		
Penny	37	35		
Peter	14	15		
Robert	24	15		
Ron	5	9		YES
Tess	8	7		
Walter	25	28		
Xin	14	17		

This table displays the CBM Concepts and Applications scores and the outcome of a behavioral screen based on ODR data for the 25 students in Mrs. Thompson's class. First, calculate the mean for each student. Then, identify the students who have a mean of 13 points or less.

1. Which students are at-risk for poor math outcomes?

2. Which students are also at-risk for poor behavioral outcomes?

Interventions

Behavior.
For Tier 2, the school employed Check-in, Check-Out (CICO), a behavior education program that provides for individual student level monitoring of progress towards meeting specific behavioral goals. Students in this program check in and check out with an assigned mentor each day, and with their teacher each period to prompt expected behavior and keep track of whether they have followed behavioral expectations throughout the day. Individual goals are set for a specified number of points earned. A reference for CICO is included at the end of this case study. An example of a CICO form used at Sunny Days school is included below:

0 = No 1= Good 2= Excellent	Be Safe Keep hands, feet, and objects to self			Be Respectful Use kind words and actions			Be Responsible Cooperate Follow directions			Working in class			Teacher initials
Class	0	1	2	0	1	2	0	1	2	0	1	2	
Recess	0	1	2	0	1	2	0	1	2	0	1	2	
Class	0	1	2	0	1	2	0	1	2	0	1	2	
Lunch	0	1	2	0	1	2	0	1	2	0	1	2	
Class	0	1	2	0	1	2	0	1	2	0	1	2	
Recess	0	1	2	0	1	2	0	1	2	0	1	2	
Class	0	1	2	0	1	2	0	1	2	0	1	2	
Total Points = Points Possible = 50				Today _____ %						Goal _____ %			

Figure 3. Check-in Check-out form used at Sunny Days Elementary for an individual student.

Math.

Sunny Days school uses V-math, produced by Voyager as its Tier 2 math intervention program. V-math relies on explicit instruction, opportunities to practice, error analysis and differentiation to support students who are struggling with foundational math concepts. Although V-math includes its own tools for progress monitoring, Sunny Days chose to continue to monitor progress using MBSP Concepts & Applications to remain consistent with district requirements. More information about V-math can be found at http://www.vmathlive.com/. At Sunny Days, intervention was provided to students four times per week, for 30 minutes per day.

Tier 2 Team Decisions

Every other week, the Tier 2 team meets at Sunny Days Elementary to review the progress of their students who receive Tier 2 interventions.

During the Tier 2 meeting, the team reviews the PM data for students in each of the various interventions available at Sunny Days School. An example of the agenda that they follow to conduct these meetings is provided in the Appendix.

The possible decisions that can be made about Tier 2 intervention include:

1. Exit/Fade. The student has met the stated performance goals and no longer requires Tier 2 support. For CICO, behavior support is faded gradually before completely discontinuing the program.

2. Continue – The student has not yet met the stated performance goals but is making progress and should continue in the intervention as designed.

3. Continue support with a teaching change – the student may require a different approach to make progress in Tier 2.

4. Consider referral for a comprehensive evaluation – the student is not responding to Tier 2 intervention.

At the beginning of the school year, as evidenced by the screening data presented on page 9, several students in Mrs. Smith's class were identified as in need of Tier 2 support for math and/or behavior. Before the Tier 2 team made decisions about individual students, the Tier 1 team reviewed class statistics to determine whether a significant number of students were not meeting grade level performance targets with Tier 1 only.

> Discussion Question: What percentage of students were meeting performance benchmarks in math in Mrs. Smith's class? (refer to Table 3) If 40% of her students were at-risk, should the team recommend individual interventions? Why or why not? What should they recommend?

Students identified for Tier 2 include Francesca, Hermione, Jamie, Mason, Tess, Ron (math & behavior), and Chris (behavior). At the initial Tier 2 meeting, Francesca, Hermione, Jamie, Mason, Tess & Ron were identified as in need of math support, and began receiving V-math intervention as described earlier in this case study. Ron and Chris received intervention through CICO.

Tier 2 Data: Math Example

Student progress during the Tier 2 math intervention is monitored weekly using MBSP Concepts and Applications. The chart below shows a graph that contains PM data for the 6 students from Mrs. Smith's class who are receiving Tier 2 math intervention.
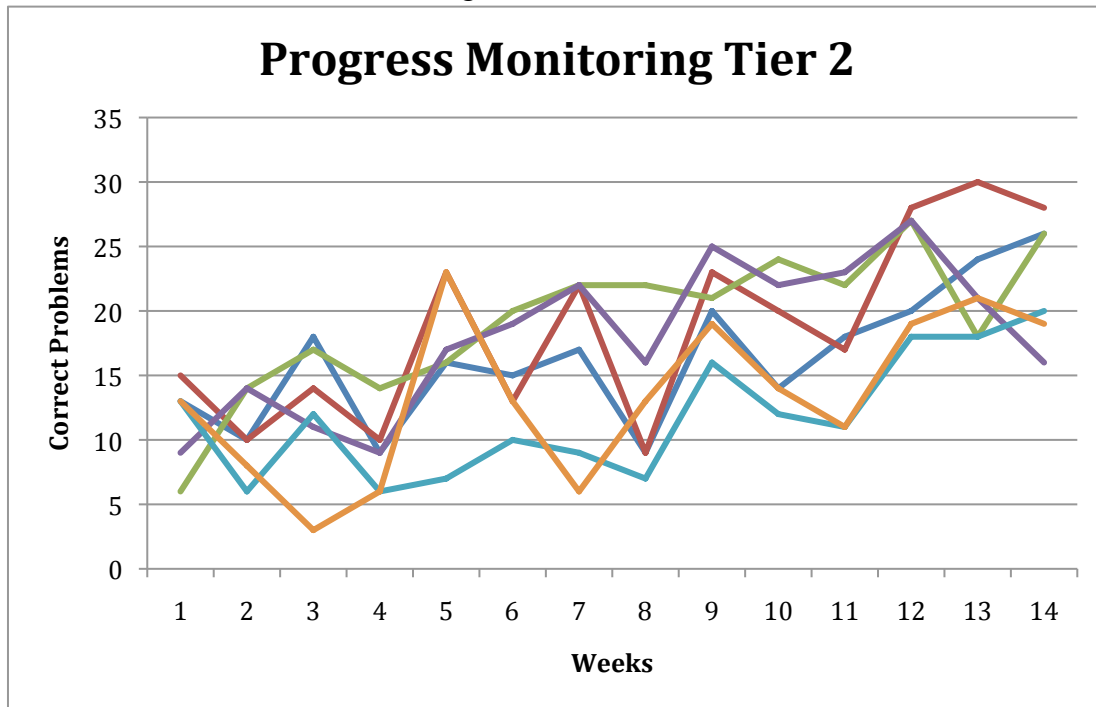

Figure 4. Progress monitoring for Tier 2

The purpose of looking at the data collectively is to determine how well the intervention is working for most students. From this graph and the collective data, Mrs. Carter sees that overall, students are responding well to the Tier 2 intervention. Table 4 shows the students' ROI.

Table 4. Rates of Improvement for Students receiving Tier 2 intervention

Student	ROI
Hermione	1
Jamie	1
Mason	1.53
Tess	0.54
Francesca	0.55
Ron	0.46

Reviewing the data collectively helps Mrs. Carter determine that her interventions are generally effective for her students. This is an important consideration at Sunny Days, because students who are non-responders can be referred for a comprehensive evaluation to determine whether they have a disability.

At Tier 2, individual student data is also closely monitored and used to guide instructional decisions. Figure 5 presents an individual student's graph with comments about how the data is used to help make instructional decisions to support student progress.
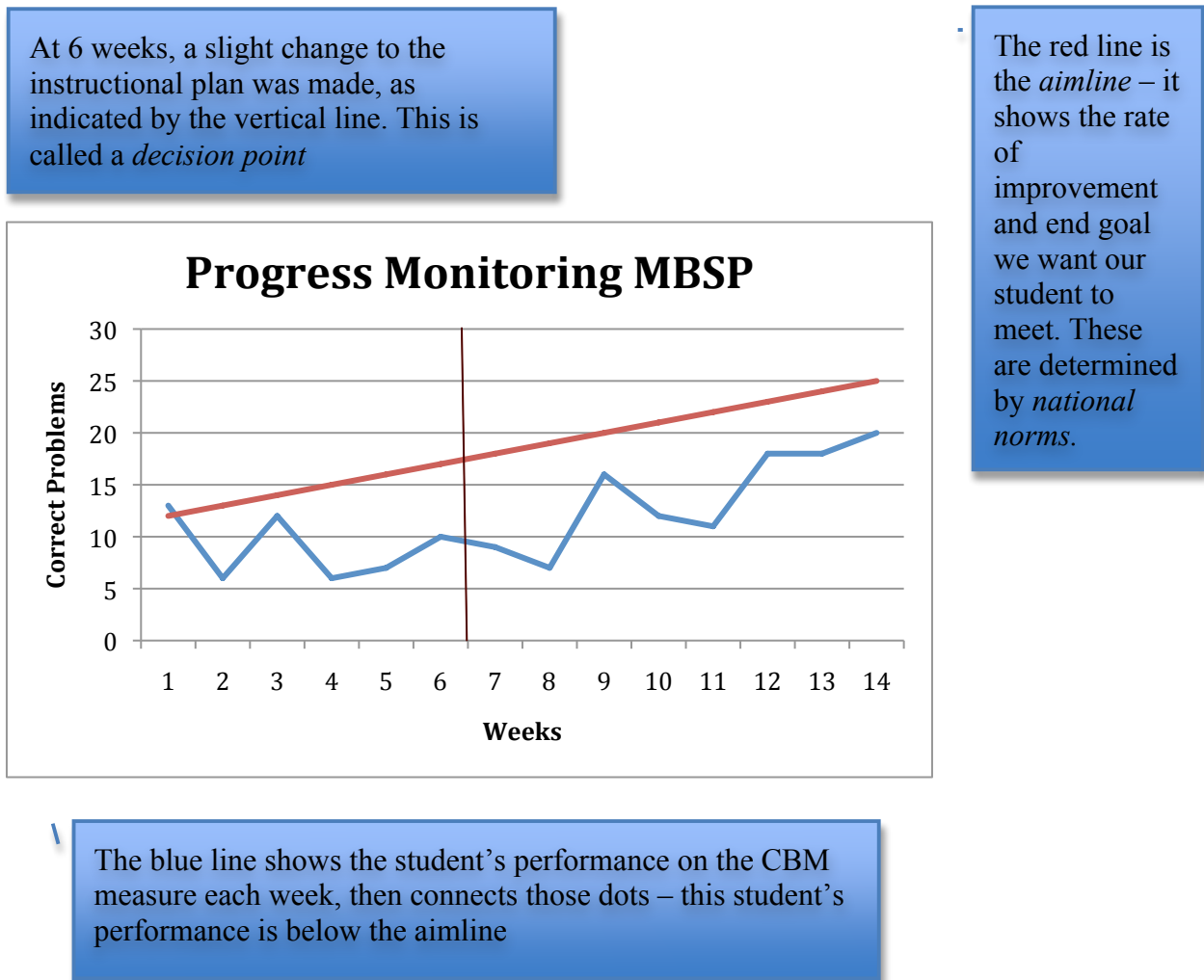
At 6 weeks, a slight change to the instructional plan was made, as indicated by the vertical line. This is called a *decision point*

The red line is the *aimline* – it shows the rate of improvement and end goal we want our student to meet. These are determined by *national norms*.

Progress Monitoring MBSP

The blue line shows the student's performance on the CBM measure each week, then connects those dots – this student's performance is below the aimline

Figure 5. Individual student's progress monitoring graph

Tier 2 for Hermione and Ron

Hermione. Hermione is described by her teachers as a highly social student who makes friends easily and generally exhibits few problem behaviors. Her teachers agreed that Hermione tends to do better with lesson plans where students are more active but can sometimes struggle with independent work. Hermione has been attending Sunny Days since Kindergarten and had not previously been identified for additional academic support.

In 2010 the Mathematics Basic Skills Monitoring (MBSP) Concepts and Applications Test was administered to all 3rd grade students as part of school-wide fall screening. On the MBSP, Hermione scored a 12, which suggested that she was at risk for not meeting grade level performance standards in math. In the following Tier 2 meeting, team members examined Hermione's performance on previous standardized tests and received input from her classroom teacher. Prior to 3rd grade, Hermione's math scores on state testing had typically placed her near the 30th percentile. Her 3rd grade teacher confirmed that she had struggled with math during the first two weeks and that deficits in earlier material were preventing her from making adequate progress in the general classroom. Based on this discussion, the Tier 2 team recommended Hermione begin receiving additional support for math.

Mr. Carter provides Tier 2 intervention in math using the V-math curriculum. He meets with students four times each week for 30 minutes each session. Hermione quickly began to show evidence of progress after joining the Tier 2 math intervention. During the first week she seemed reluctant to contribute and initially lacked confidence in her work. After a few weeks in the small group setting she appeared increasingly comfortable, more frequently volunteering answers and seeking out opportunities to work on problems with various partners. Her classroom teacher also reported improvements in her work and classroom participation during math instruction.

The data collected through progress monitoring reinforced the perception that Hermione was making regular gains. Although individual assessments fluctuated, Hermione's scores showed noticeable improvement after only a few weeks. The initial target for all students receiving Tier 2 math support is an average gain of 1 point per week. By week six, the trend line for Hermione's results was consistently at or above this target line. A typical 3rd grader would be expected to score approximately 20 points on the MBSP at the beginning of the school year and approximately 30 points at the end of the year. Beginning in week 9, Hermione scored 23, 20, 22, 27, and 25 points on the MBSP over 5 consecutive weeks of progress monitoring. The Tier 2 team was presented this data along with CBM scores from tier 1, and input from both the classroom teacher and Mr. Carter leading the intervention. On the basis of the information presented, the team concluded that the Tier 2 intervention had been a success and Hermione exited from Tier 2 support.

Figure 6. Hermione's Progress Monitoring Graph for Math.
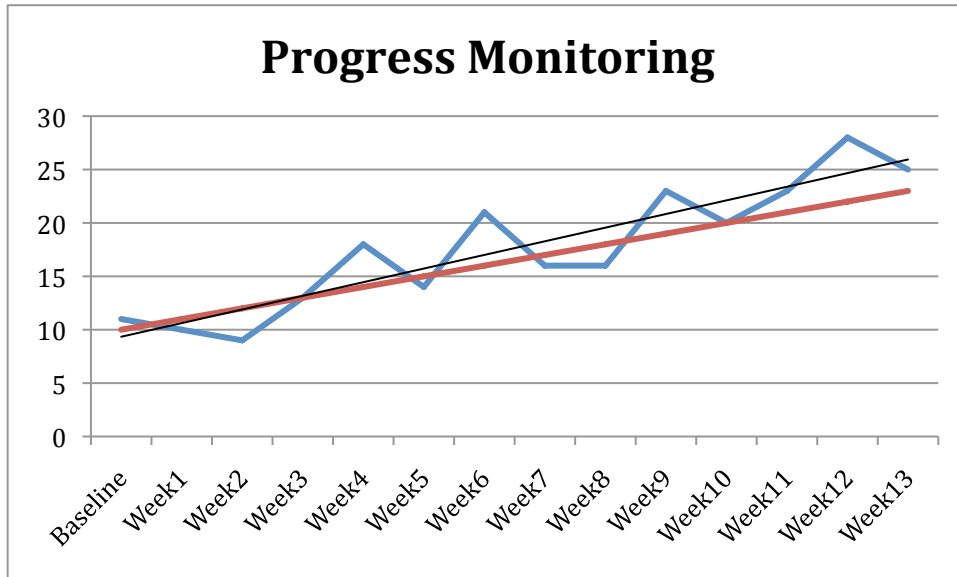
The blue line represents Hermione's actual performance, the red line shows her targeted performance, and the black line shows her slope. There are no decision points on Hermione's graph because she has consistently responded and required no instructional changes to her program.

As can be seen on her graph, Hermione responded well to small group instruction, showed immediate progress, and was able to exit support after only 12 weeks of intervention. This experience is common but far from universal. Another case study will show how Tier 2 support can be used with more flexibility for students with more complex needs.

Ron. Ron is also a third grade student. His teachers describe him as enthusiastic about classroom participation and very creative on any artistic subject. During math or reading assignments Ron frequently has trouble staying on task. He is frequently out of his seat, sometimes uses materials inappropriately, and can be a serious disruption to instruction. He also seems to seek adult attention and will escalate his behaviors until the teacher responds.

In the first few weeks of the school year Ron was referred to the Tier 2 team for both academic and behavior support. On the MBSP Ron received a score of 12, which placed him at risk for not meeting grade level performance targets. In previous years, Ron had scored close to the 40th percentile on district math assessments. A series of office referrals for issues in the classroom and on the playground also suggested a need for behavior support. The Tier 2 team concluded

that the academic and behavior issues were likely related and recommended both a math and behavior intervention for Ron.

As described on page 10, Sunny Days Elementary uses a program called Check-in Check-out (CICO) for Tier 2 behavior support. Upon arriving at school. The student checks in with a mentor teacher who gives them their daily point card, sets their daily goal and reminds of them of the specific behavioral expectations they are trying to meet. Throughout the day (during six "periods") the student meets briefly with the teacher at the start of the "period" to Check-in. In a few seconds the teacher reviews behavior goals for the class and sets the student up to be successful. At the end of the "period" they again meet briefly to Check-out. The teacher and student assess the stated goals and the student is rated from 0 to 2 points in each of the target areas. At the end of the day the student meets again with a mentor teacher to assess the day. If the student has met his goals for the day he earns points towards a pre-determined reward. The assessment is then taken home and given to the student's parents. An emphasis is placed on providing increased structure and prompts and on providing positive feedback for the student.

As is shown in Figure 7, during his first month in Tier 2 math support, Ron appeared to be responding well. His weekly progress monitoring showed regular improvement. For most of the month Ron met or exceeded expectations and daily work also seemed to be improving.

Beginning in week 6 ongoing problems with behavior began to seriously disrupt his progress within the math intervention. Remaining on-task for the 6 minutes required to complete progress monitoring became extremely difficult for Ron. Ron's scores went from consistently exceeding the target to well below where he had started the intervention.

Figure 7. Ron's Progress Monitoring Graph for Math.
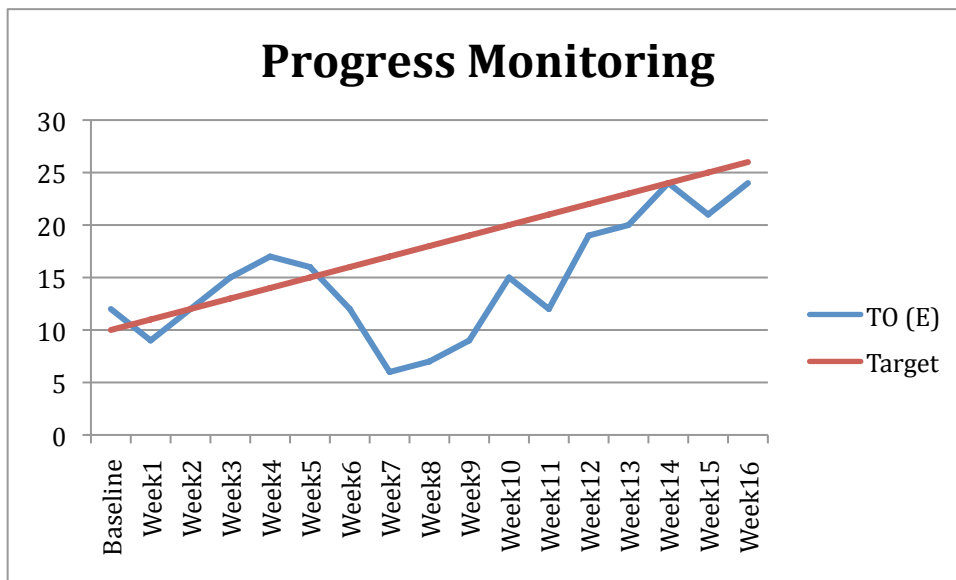
Stop and reflect: At what point during Ron's intervention would you have considered making a teaching change? Why? What other data would you want to have to make that decision?

By looking at Figure 7, you can see that Ron appeared to be struggling during weeks 6, 7, and 8 which placed him well below the target and the decision was made to review both his academic and behavior intervention. Figure 8 presents his behavior data. This chart shows the percentage of daily points that Ron earned, with the target set for 80% each day. The "0" scores represent days that Ron was a "no show" – in other words, he didn't complete the process with his teacher. The area of the chart with the arrow pointing to it coincides with the low performance on the PM in math measures. The team reviewed the behavior data for Ron and noted some issues (Figure 8).

Figure 8. Ron's Check-in, Check-out data.
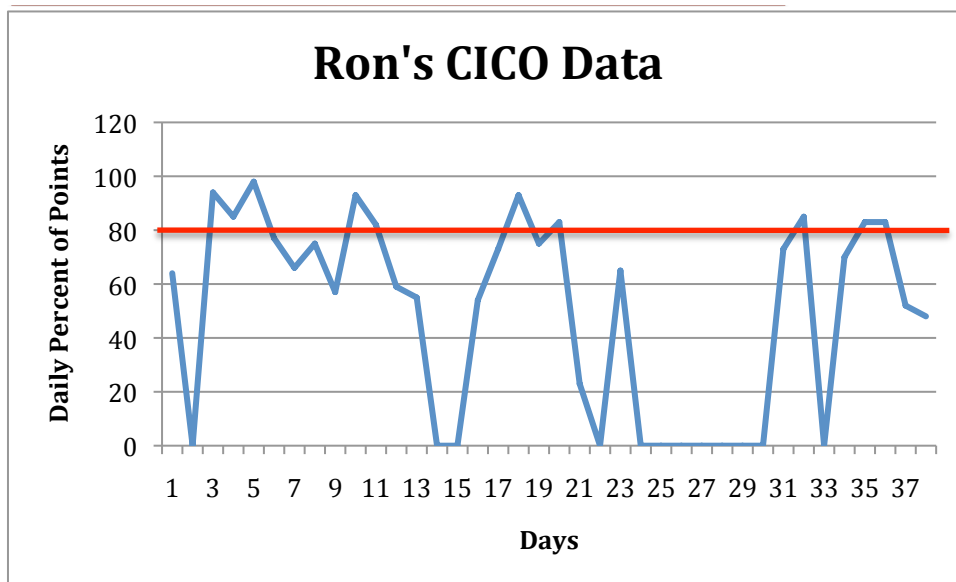
Ron was a "no show" on these days, avoiding checking in with his teacher.
These dates coincide with the Week 6 dip in his PM data.

Ron was only meeting his goals under CICO occasionally and regularly avoided meeting with teachers to assess his behavior. In both the regular classroom and the math intervention, disruptions remained a serious issue for Ron.

After meeting with the Tier 2 team, small adjustments were made to both how CICO was functioning and the support Ron was receiving in his math intervention. It was determined that because Ron was rarely meeting his CICO goals that the behavior intervention needed to be altered. The team first talked with Ron's teacher to determine how she was implementing CICO. They found that instead of emphasizing positive behavior, she was using the time to scold Ron

on the poor choices he had made through the day. Instead of CICO serving as an opportunity for Ron to be successful, it had turned in to another opportunity for him to be "in trouble", and so he began avoiding the process. The team worked with Ron's teacher, and they also decided to make his goals more specific, and more achievable so that he would be successful. In addition, greater effort was made in the math intervention to present Ron with positive opportunities to contribute. The Tier 2 team agreed to continue the amended approach for one month.

The new approach showed slow but marked gains. Progress monitoring scores for several more weeks remained below the levels observed during the first month. Results climbed slowly but steadily and in week 12 finally passed the levels seen more than a month earlier. Although Ron's scores have not surpassed the target since the first month, the current trend suggests he is on track to meet the stated goal with continued support from the math intervention.

In Closing

This case study walked through the specifics of a Tiered Service delivery model in place at one school, and focused primarily on how Tier 2 is operationalized. Tiered service isn't a specific program, and the programs and assessments discussed in this case study might not be appropriate for all schools and all settings – they simply were the specific choices put into place in Sunny Days elementary school. Districts will need to make choices that reflect their local needs.

Throughout this case study, we've provided links and references to resources that we hope are helpful in guiding other schools through this process. Some important resources that informed this work and should be accessed by any organization interested in learning more about Tiered Service Delivery are:

1. **National Center on Response to Intervention (NCRTI)**. http://www.rti4success.org
The wealth of information available through this site can be overwhelming. You might consider starting with the NCRTI's Essential Components guide and the Tools Charts. The Essential Components guide provides a broad overview of the RTI process and is a great starting point. The Tools Charts include "consumer reports" reviews of Screening, Progress Monitoring and Instructional tools that can be used in an RTI model.

2. National Technical Assistance Center on **Positive Behavioral and Interventional Supports (PBIS)**. http://www.pbis.org
The PBIS website provides numerous resources to support schools, districts and states interested in learning more about PBIS. Good places to start are their document "What is School Wide Positive Behavioral Interventions and Supports?" and their video on the Basic SWPBS Features.

3. **National Center on Student Progress Monitoring.** http://studentprogress.org
This website contains helpful resources and tools that explain how to implement progress monitoring. Especially helpful are the case studies found under the "Resources" link.

4. **Check-In, Check-Out.** The interested reader should review the text:
Hawken, Pettersson, Mootz, & Anderson (2005). *The Behavior Education Program: A Check-in, Checkout Intervention for Students at Risk.* New York, NY: Guilford Press.

Appendix

Tier 1 Team Meeting

Agenda

Team Leader: _____ **Recorder:** _____ **Date:** _____

Present:

_____

I.   Review agenda (2 minutes)

II.   Review task list from previous meeting, document status of tasks (10 minutes)

Who	What	When	Status			
			Not started	In progress	Done	Not Needed
			Not started	In progress	Done	Not Needed
			Not started	In progress	Done	Not Needed
			Not started	In progress	Done	Not Needed

III. Review existing data (20 minutes)
   a. Academic outcomes & referral data (if new data collected since prior meeting)
   b. Behavior outcomes & referral data (avg referrals/day/month, referrals by location, time, PB and student)
   c. Fidelity data
        i. Team Implementation Checklist (TIC) (update)
        ii. School-wide Evaluation Tool (SET)
        iii. Self-assessment Survey (SAS)
        iv. School Safety Survey (SSS)

IV. Problem-solving based on data (10 minutes)

Problem	Decision	Who is in charge and what is the target date?

Note: Add rows to this table as required

V. Action planning and task list (10 minutes)

Who	What	When

VI. Confirm next meeting date/time/location (3 minutes)

Tier 2 Intervention Support Team

Agenda

Team Leader: _____ **Recorder:**_____ **Date:** _____

Present:

    III.   *Review agenda (2 minutes)*
    IV.   *Review task list from previous meeting, document status of tasks (10 minutes)*

Who	What	When	Status
			Not started In progress Done Not Needed
			Not started In progress Done Not Needed
			Not started In progress Done Not Needed
			Not started In progress Done Not Needed

    V.   *Targeted intervention summary (20 minutes)*

Intervention	# of students by grade in intervention					# of students by grade meeting goals				
	1	**2**	**3**	**4**	**5**	**1**	**2**	**3**	**4**	**5**
Behavior										
Reading										
Math										
Lang Arts										

For students who are not meeting goals, determine problem and next steps (recorder take notes):
        1. Possible problems: fidelity, intervention/function mismatch, intervention needs to be modified
        2. Possible decisions: Meet with teacher, change intervention, conduct efficient FBA

*Student	Problem	Decision	Who is in charge and what is the target date?

Note: Add rows to this table as required