Tier 1: Methods of Classroom Data Collection

Jim Wright
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The Cayuga—Onondaga Teacher Center proudly presents

Response to Intervention

With Jim Wright of Intervention Central

Day 1 - A Teacher’s Tool Kit
Day 2 - Practical Implementation of RtI
(participants can attend either day or both days)

A Teacher’s Tool Kit
Students who struggle academically often require individualized interventions carefully tailored to their areas of academic deficit. This workshop is designed to give teachers and support staff the necessary tools to plan and carry out effective academic and behavioral interventions.

Practical Implementation of RtI
This workshop clarifies questions about the practical implementation of RTI interventions. Participants will further develop confidence in their selection of evidence-based interventions to match presenting student classroom concerns.

When: Thursday, June 28th and Friday, June 29th
Time: 9:00 am — 3:00 pm, Registration begins at 8:30
Who: K-12 teachers, administrators, school psychologists, counselors, literacy coaches, community agencies providing academic or behavioral interventions
Where: Cayuga—Onondaga BOCES, Conference Room

Registration is requested, as seating is limited.

Registration contact:
Victoria Shepardson, Director
cayuga-onondaga teacher center
315-253-0361 ext. 5208
vshepardson@cayboces.org
Response to Intervention

Latest Interventions

Motivation Challenge 1: The Student Cannot Do the Work
August 20th, 2011
Students who are unmotivated because they cannot do the academic work need high-quality direct instruction. This write-up shows how to effectively teach them.

Web Resources

New York State RIT Technical Assistance Center
NY’s Regulations online RTI as a school district’s process to determine if a student responds to scientific, research-based instruction.

Intervention Central provides teachers, schools, and districts with free resources to help struggling learners and implement Response to Intervention.

Happy Halloween! Here are new resources available for October 2011 on Intervention Central.

- Create an Intervention Central Account. You can now create a free personal account on Intervention Central to save documents created with selected online applications. At present, the site has one program, ChartDog Graphmaker, that allows users to save unique student progress-monitoring graphs—and more applications are under development. Check out this QuickGuide for instructions on how to create your own Intervention Central account.
- Use Phrase-Cued Tests to Assist Comprehension. Phrase-cued tests train students to recognize the natural pauses that occur between phrases in their reading and to enhance their comprehension of the text. Review a step-by-step script to use this strategy.
- Create Phrase-Cued Tests Online. This online application, the Phrase-Cued Test Generator, allows educators to rapidly annotate phrase-cued tests.
- Target Student Alphabetic Skills. Letter Cube Blending is an intervention that uses a game-like format to reinforce student alphabetic skills.

This is an exciting year for Intervention Central, with lots more tools and intervention resources on the way. Visit often!

RTI Toolkit: A Practical Guide for Schools
RTI & Classroom Behaviors
RTI Toolkit: Implementing RTI in Middle and High Schools
Workshop PPTs and Handout Available at:

http://www.interventioncentral.org/cotc
Educational Decisions and Corresponding Types of Assessment

- SCREENING/BENCHMARKING DECISIONS: Tier 1: Brief screenings to quickly indicate whether students in the general-education population are academically proficient or at risk.

- PROGRESS-MONITORING DECISIONS: At Tiers 1, 2, and 3, ongoing ‘formative’ assessments to judge whether students on intervention are making adequate progress.

- INSTRUCTIONAL/DIAGNOSTIC DECISIONS: At any Tier, detailed assessment to map out specific academic deficits, discover the root cause(s) of a student’s academic problem.

- OUTCOME DECISIONS: Summative assessment (e.g., state tests) to evaluate the effectiveness of a program.

The use of informal assessments during the course of instruction can provide teachers with additional information on which to base instructional decisions. A combination of CBMs and informal, ongoing assessments (checklists, reading inventories, running records) completed by teachers to monitor progress are recommended so that use of CBM is not the sole index of progress, which could lead to unintended consequences such as children being fast and accurate in word reading, but inattentive to the meaning of what is read.

Collecting Classroom Data

Focus of Inquiry: What are some examples of data collection in the classroom and how can each be placed in a ‘data context (baseline, goal, progress-monitoring)?
Classroom Interventions: Potential ‘Fatal Flaws’

Any intervention must include 4 essential elements. The absence of any one of the elements would be considered a ‘fatal flaw’ that prevents the school from drawing meaningful conclusions about the student’s response to the intervention:

1. **Clearly defined problem.** The student’s target concern is stated in specific, observable, measurable terms. This ‘problem identification statement’ is the most important step of the problem-solving model (Bergan, 1995), as a clearly defined problem allows the teacher or RTI Team to select a well-matched intervention to address it.

2. **Baseline data.** The teacher or RTI Team measures the student’s academic skills in the target concern (e.g., reading fluency, math computation) prior to beginning the intervention. Baseline data becomes the point of comparison throughout the intervention to help the school to determine whether that intervention is effective.

3. **Performance goal.** The teacher or RTI Team sets a specific, data-based goal for student improvement during the intervention and a checkpoint date by which the goal should be attained.

4. **Progress-monitoring plan.** The teacher or RTI Team collects student data regularly to determine whether the student is on-track to reach the performance goal.

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Classroom Data Collection Methods: Examples

- Existing data
- Global skills checklist
- Behavioral frequency count/behavior rate
- Rating scales (including Behavior Report Cards)
- Academic skills: Cumulative mastery log
- Work products
- Behavior log
- Curriculum-based measurement
### Classroom-Friendly Methods of Progress-Monitoring

This resource presents a number of sources of information and data collection methods that can help teachers to monitor the progress of students on classroom (Tier 1) interventions.

<table>
<thead>
<tr>
<th>Method</th>
<th>Page</th>
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<tbody>
<tr>
<td>Existing data</td>
<td>p. 3</td>
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<tr>
<td>Global skills checklist</td>
<td>p. 5</td>
</tr>
<tr>
<td>Behavioral frequency count/behavior rate</td>
<td>p. 11</td>
</tr>
<tr>
<td>Rating scales</td>
<td>p. 14</td>
</tr>
<tr>
<td>Academic skills: Cumulative mastery log</td>
<td>p. 20</td>
</tr>
<tr>
<td>Work products</td>
<td>p. 23</td>
</tr>
<tr>
<td>Behavior log</td>
<td>p. 27</td>
</tr>
<tr>
<td>Curriculum-based measurement</td>
<td>p. 30</td>
</tr>
</tbody>
</table>
Classroom Data Collection

*Existing data.* The teacher uses information already being collected in the classroom or school that is relevant to the identified student problem.

Examples of existing data include:

- grades
- attendance/tardy records,
- office disciplinary referrals
- homework completion

• **NOTE:** Existing data is often not sufficient alone to monitor a student on intervention but can be a useful *supplemental* source of data on academic or behavioral performance.
Existing Data: Example

Example: Mrs. Berman, a high-school social studies teacher, selected grades from weekly quizzes as one measure to determine if a study-skills intervention would help Rick, a student in her class. Prior to the intervention, the teacher computed the average of Rick’s most recent 4 quiz grades. The baseline average quiz grade for Rick was 61. Mrs. Smith set an average quiz grade of 75 as the intervention goal. The teacher decided that at the intervention check-up in six weeks, she would average the most recent 2 weekly quiz grades to see if the student reached the goal.
Classroom Data Collection

Global skills checklist. The teacher selects a global skill (e.g., homework completion; independent seatwork). The teacher then breaks the global skill down into a checklist of component sub-skills—a process known as ‘discrete categorization’ (Kazdin, 1989). An observer (e.g., teacher, another adult, or even the student) can then use the checklist to note whether a student successfully displays each of the sub-skills on a given day. Classroom teachers can use these checklists as convenient tools to assess whether a student has the minimum required range of academic enabling skills for classroom success.
Global Skills Checklist: Example

Example: A middle school math instructor, Mr. Haverneck, was concerned that a student, Rodney, appears to have poor ‘organization skills’. Mr. Haverneck created a checklist of observable subskills that, in his opinion, were part of the global term ‘organization skills:

- arriving to class on time;
- bringing work materials to class;
- following teacher directions in a timely manner;
- knowing how to request teacher assistance when needed;
- having an uncluttered desk with only essential work materials.

Mr. Haverneck monitored the student’s compliance with elements of this organization -skills checklist across three days of math class. On average, Rodney successfully carried out only 2 of the 5 possible subskills (baseline). Mr. Haverneck set the goal that by the last week of a 5-week intervention, the student would be found to use all five of the subskills on at least 4 out of 5 days.
‘Academic Enabler’ Observational Checklists: Measuring Students’ Ability to Manage Their Own Learning
‘Academic Enabler’ Skills: Why Are They Important?

Student academic success requires more than content knowledge or mastery of a collection of cognitive strategies. Academic accomplishment depends also on a set of ancillary skills and attributes called ‘academic enablers’ (DiPerna, 2006). Examples of academic enablers include:

- Study skills
- Homework completion
- Cooperative learning skills
- Organization
- Independent seatwork

‘Academic Enabler’ Skills: Why Are They Important? (Cont.)

Because academic enablers are often described as broad skill sets, however, they can be challenging to define in clear, specific, measureable terms. A useful method for defining a global academic enabling skill is to break it down into a checklist of component sub-skills—a process known as ‘discrete categorization’ (Kazdin, 1989). An observer can then use the checklist to note whether a student successfully displays each of the sub-skills.

‘Academic Enabler’ Skills: Why Are They Important? (Cont.)

Observational checklists that define academic enabling skills have several uses in Response to Intervention:

- Classroom teachers can use these skills checklists as convenient tools to assess whether a student possesses the minimum ‘starter set’ of academic enabling skills needed for classroom success.

- Teachers or tutors can share examples of academic-enabler skills checklists with students, training them in each of the sub-skills and encouraging them to use the checklists independently to take greater responsibility for their own learning.

- Teachers or other observers can use the academic enabler checklists periodically to monitor student progress during interventions—assessing formatively whether the student is using more of the sub-skills.

### ‘Academic Enabler’ Skills: Sample Observational Checklists

<table>
<thead>
<tr>
<th>Study Skills</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Takes complete, organized class notes in legible form and maintains them in one accessible note book</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>Reviews class notes frequently (e.g., after each class) to ensure understanding</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>When reviewing notes, uses highlighters, margin notes, or other strategies to note questions or areas of confusion for later review with teacher or tutor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>Follows an efficient strategy to study for tests and quizzes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>Allocates enough time to study for tests and quizzes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>Is willing to seek help from the teacher to answer questions or clear up areas of confusion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Other:**

<table>
<thead>
<tr>
<th>Comments:</th>
</tr>
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<tbody>
<tr>
<td></td>
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</tbody>
</table>
### ‘Academic Enabler’ Skills: Sample Observational Checklists

<table>
<thead>
<tr>
<th>Organization Skills. The student:</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>arrives to class on time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>_</td>
</tr>
<tr>
<td>maintains organization of locker to allow student to efficiently store and retrieve needed books, assignments, work materials, and personal belongings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>_</td>
</tr>
<tr>
<td>maintains organization of backpack or book bag to allow student to efficiently store and retrieve needed books, assignments, work materials, and personal belongings</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>_</td>
</tr>
<tr>
<td>brings to class the necessary work materials expected for the course (e.g., pen, paper, calculator, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>_</td>
</tr>
<tr>
<td>is efficient in switching work materials when transitioning from one in-class learning activity to another</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>_</td>
</tr>
<tr>
<td>Other: __________________________</td>
<td>Poor</td>
<td>Fair</td>
<td>Good</td>
<td>NA</td>
</tr>
</tbody>
</table>

Comments:

________________________________________

________________________________________

________________________________________
### Homework Completion

The student:

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>writes down homework assignments accurately and completely</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>makes use of available time in school (e.g., study halls, homeroom)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>to work on homework</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>has an organized, non-distracting workspace available at home to do homework</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>creates a work plan before starting homework (e.g., sequencing the order in which assignments are to be completed; selecting the most challenging assignment to start first when energy and concentration are highest)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>when completing homework, uses highlighters, margin notes, or other strategies to note questions or areas of confusion for later review with teacher or tutor</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>turns in homework on time</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Other: ____________________________

Comments:

________________________________________________________________________
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### Cooperative Learning Skills

The student:

<table>
<thead>
<tr>
<th>Item</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>participates in class discussion</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>gets along with others during group/pair activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>participates fully in group/pair activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>does his or her ‘fair share’ of work during group/pair activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
<tr>
<td>is willing to take a leadership position during group/pair activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>NA</td>
</tr>
</tbody>
</table>

**Other:**

Comments:

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### ‘Academic Enabler’ Skills: Sample Observational Checklists

#### Independent Seat Work

<table>
<thead>
<tr>
<th>The student:</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>- has necessary work materials for the assignment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>- is on-task during the assignment at a level typical for students in the class</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>- refrains from distracting behaviors (e.g., talking with peers without permission, pen tapping, vocalizations such as loud sighs or mumbling, etc.)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
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<tr>
<td>- recognizes when he or she needs teacher assistance and is willing to that assistance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>- requests teacher assistance in an appropriate manner</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>- requests assistance from the teacher only when really needed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>- if finished with the independent assignment before time expires, uses remaining time to check work or engage in other academic activity allowed by teacher</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<tr>
<td>- takes care in completing work—as evidenced by the quality of the finished assignment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
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<tr>
<td>- is reliable in turning in assignments done in class.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td></td>
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<tr>
<td>- Other:</td>
<td>1</td>
<td>2</td>
<td>3</td>
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**Comments:**


### Motivation

The student:

- [ ] has a positive sense of 'self-efficacy' about the academic content area (self-efficacy can be defined as the confidence that one can be successful in the academic discipline or subject matter if one puts forth reasonable effort)  
  - Poor  
  - Fair  
  - Good  
  - NA

- [ ] displays some apparent *intrinsic* motivation to engage in course work (e.g., is motivated by topics and subject matter discussed or covered in the course; finds the act of working on course assignments to be reinforcing in its own right)  
  - Poor  
  - Fair  
  - Good  
  - NA

- [ ] displays apparent *extrinsic* motivation to engage in course work (e.g., is motivated by grades, praise, public recognition of achievement, access to privileges such as sports eligibility, or other rewarding outcomes)  
  - Poor  
  - Fair  
  - Good  
  - NA

- [ ] Other: 

  ____________________________________________________________________________

  - Poor  
  - Fair  
  - Good  
  - NA

**Comments:**

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### ‘Academic Enabler’ Skills: Sample Observational Checklists

**Teacher-Defined Academic Enabling Skill:**

<table>
<thead>
<tr>
<th>Skill Name:</th>
<th>Essential Subskills: The student:</th>
</tr>
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<tbody>
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<thead>
<tr>
<th>Poor</th>
<th>Fair</th>
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</table>
Activity: Academic Enablers
Observational Checklist

At your tables:

• Review the ‘Academic Enablers’ Observational Checklists.
• Discuss how your school might use the existing examples or use the general format to create your own observational checklists.
Classroom Data Collection

• **Behavioral Frequency Count/Behavioral Rate.** An observer (e.g., the teacher) watches a student’s behavior and keeps a cumulative tally of the number of times that the behavior is observed during a given period. Behaviors that are best measured using frequency counts have clearly observable beginning and end points—and are of relatively short duration.

  - Examples include:

    - student call-outs
    - requests for teacher help during independent seatwork.
    - raising one’s hand to make a contribution to large-group discussion.

Teachers can collect data on the frequency of observed student behaviors: (1) by keeping a cumulative mental tally of the behaviors; (2) by recording behaviors on paper (e.g., as tally marks) as they occur; or (3) using a golf counter or other simple mechanical device to record observed behaviors.
Behavioral Frequency Count/Behavioral Rate: Example

• Example: Ms. Stimson, a fourth-grade teacher, was concerned at the frequency that a student, Alice, frequently requested teacher assistance unnecessarily during independent seatwork. To address this concern, the teacher designed an intervention in which the student would first try several steps on her own to resolve issues or answer her questions before seeking help from the instructor. Prior to starting the intervention, the teacher kept a behavioral frequency count across three days of the number of times that the student approached her desk for help during a daily 20-minute independent seatwork period (baseline).

• Ms. Stimson discovered that, on average, the student sought requested help 8 times per period (equivalent to 0.4 requests for help per minute). Ms. Stimson set as an intervention goal that, after 4 weeks of using her self-help strategies, the student’s average rate of requesting help would drop to 1 time per independent seatwork period (equivalent to 0.05 requests for help per minute).
Classroom Data Collection

Rating scales. A scale is developed with one or more items that a rater can use to complete a global rating of a behavior. Often the rating scale is completed at the conclusion of a fixed observation period (e.g., after each class period; at the end of the school day).

NOTE: One widely used example of rating scales routinely used in classrooms is the daily behavior report (DBR). The teacher completes a 3- to 4-item rating scale each day evaluating various target student behaviors. A detailed description of DBRs appears on the next page, along with a sample DBR that assesses the student’s interactions with peers, compliance with adult requests, work completion, and attention to task.
Response to Intervention

Monitoring Student Academic or General Behaviors:
Behavior Report Cards

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Behavior Report Cards (BRCs) Are...

brief forms containing student behavior-rating items. The teacher typically rates the student daily (or even more frequently) on the BRC. The results can be graphed to document student response to an intervention.
Behavior Report Cards Can Monitor Many Behaviors, Including...

- Hyperactivity
- On-Task Behavior (Attention)
- Work Completion
- Organization Skills
- Compliance With Adult Requests
- Ability to Interact Appropriately With Peers
Behavior Report Card Maker

- Helps teachers to define student problem(s) more clearly.
- Reframes student concern(s) as replacement behaviors, to increase the likelihood for success with the academic or behavioral intervention.
- Provides a fixed response format each day to increase the consistency of feedback about the teacher’s concern(s).
- Can serve as a vehicle to engage other important players (student and parent) in defining the problem(s), monitoring progress, and implementing interventions.
Behavior Report Card Maker

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Response to Intervention

Jim's Report Card

Student Name: Brian  Date: 

Rater: Mr. Wright  Classroom: Classroom 245

Directions: Review each of the Behavior Report Card items below. For each item, rate the degree to which the student showed the behavior or met the behavior goal.

Brian spoke respectfully and complied within 1 minute with adult requests without argument or complaint.

The degree to which Brian met this behavior goal

1 2 3

Brian went to the nurse only when needed.

How well Brian did in meeting the behavior goal

1 2 3

Poor Fair Good

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Rating Scales: Example

Example: All of the teachers on a 7th-grade instructional team decided to use a Daily Behavior Report to monitor classroom interventions for Brian, a student who presented challenges of inattention, incomplete work, and occasional non-compliance. They created a DBR with the following items:

- **Brian focused his attention on teacher instructions, classroom lessons and assigned work.**
- **Brian completed and turned in his assigned class work on time.**
- **Brian spoke respectfully and complied with adult requests without argument or complaint.**

Each rating item was rated using a 1-9 scale:

On average, Brian scored no higher than 3 (‘Never/Seldom’ range) on all rating items in all classrooms (**baseline**). The team set as an **intervention goal** that, by the end of a 6-week intervention to be used in all classrooms, Brian would be rated in the 7-9 range (‘Most/All of the Time’) in all classrooms.
Activity: Daily Behavior Report Card

At your tables:

• Discuss the Behavior Report Card as a classroom monitoring tool.

• What use(s) could you find for such a measurement tool?

• How would you share this tool with others in your school?
Classroom Data Collection

• **Academic Skills: Cumulative Mastery Log.** During academic interventions in which the student is presented with specific items such as math facts or spelling words, the instructor can track the impact of the intervention by recording and dating mastered items in a cumulative log.

• To collect baseline information, the instructor reviews all items from the academic-item set with the student, noting which items the student already knows. Then, throughout the intervention, the instructor logs and dates any additional items that the student masters.
Example: Mrs. Ostrowski, a 1st-grade teacher, decides to provide additional intervention support for Jonah, a student in her class who does not have fluent letter recognition skills. Before starting an intervention, she inventories and records Jonah’s baseline skills—noting that Jonah can fluently and accurately recognize 18 upper-case letters and 14 lower-case letters from the English alphabet. She sets as an intervention goal that Jonah will master all remaining items—8 upper-case and 12 lower-case letters—within four weeks.

Mrs. Ostrowski then begins the daily intervention (incremental rehearsal of letters using flashcards). Whenever Jonah is able fluently and accurately to name a previously unknown letter, the teacher records and dates that item in her cumulative mastery log.
Classroom Data Collection

Work Products. Student work products can be collected and evaluated to judge whether the student is incorporating information taught in the course, applying cognitive strategies that they have been taught, or remediating academic delays. Examples of work products are math computation worksheets, journal entries, and written responses to end-of-chapter questions from the course textbook.

Whenever teachers collect academic performance data on a student, it is recommended that they also assess the performance of typical peers in the classroom. Work products can be assessed in several ways, depending on the identified student problem.
Work Products: Example

• Example: Mrs. Franchione, a social studies teacher, identified her eighth-grade student, Alexandria, as having difficulty with course content. The student was taught to use question generation as a strategy to better identify the main ideas in her course readings.

• Mrs. Franchione decided to assess Alexandria’s student journal entries. Each week, Mrs. Franchione assigned students 5 key vocabulary terms and directed them to answer a social studies essay question while incorporating all 5 terms. She also selected 3 typical students to serve as peer comparisons.

Mrs. Franchione decided to assess Alexandria’s journal entries according to the following criteria:

• Presence of weekly assigned vocabulary words in the student essay
• Unambiguous, correct use of each assigned vocabulary term in context
• Overall quality of the student essay on a scale of 1 (significantly below peers) to 4 (significantly above peers).
To establish a **baseline** before starting the intervention, Mrs. Franchione used the above criteria to evaluate the two most recent journal entries from Alexandria’s journal—and averaged the results: 4 of assigned 5 vocabulary terms used; 2 used correctly in context; essay quality rating of 1.5.

**Peer comparison:** all 5 assigned vocabulary terms used; 4 used correctly in context; average quality rating of 3.2.

Mrs. Franchione set an **intervention goal** for Alexandria that—by the end of the 5-week intervention period—the student would regularly incorporate all five vocabulary terms into her weekly journal entries, that at least 4 of the five entries would be used correctly in context, and that the student would attain a quality rating score of 3.0 or better on the entries.
Activity: Work Products

At your tables:

• Review the form for assessing work products.

• Discuss how your school might be able to use this existing form or modify it to ‘standardize’ the collection and evaluation of student work products.
Classroom Data Collection

**Behavior Log.** Behavior logs are narrative ‘incident reports’ that the teacher records about problem student behaviors. The teacher makes a log entry each time that a behavior is observed. An advantage of behavior logs is that they can provide information about the context within which a behavior occurs. (Disciplinary office referrals are a specialized example of a behavior log.)

Behavior logs are most useful for tracking problem behaviors that are serious but do not occur frequently.
Example: Mrs. Roland, a 6th-grade Science teacher, had difficulty managing the behavior of a student, Bill. While Bill was often passively non-compliant, he would occasionally escalate, become loudly defiant and confrontational, and then be sent to the principal’s office. Because Mrs. Roland did not fully understand what factors might be triggering these student outbursts, she began to keep a behavior log. She recorded instances when Bill’s behavior would escalate to become confrontational. Mrs. Roland’s behavior logs noted the date and time of each behavioral outburst, its duration and severity, what activity the class was engaged in when Bill’s behavioral outburst occurred, and the disciplinary outcome. After three weeks, she had logged 4 behavioral incidents, establishing a baseline of about 1 incident every 3.75 instructional days.
Mrs. Roland hypothesized that Bill became confrontational to escape class activities that required him to read aloud within the hearing of his classmates. As an intervention plan, she changed class activities to eliminate public readings, matched Bill to a supportive class ‘buddy’, and also provided Bill with additional intervention in reading comprehension ‘fix up’ skills. Mrs. Roland set as an intervention goal that within 4 weeks Bill’s rate of serious confrontational outbursts would drop to zero.
Classroom Data Collection

**Curriculum-Based Measurement.** Curriculum-Based Measurement (CBM) is a family of brief, timed measures that assess basic academic skills. CBMs have been developed to assess phonemic awareness, oral reading fluency, number sense, math computation, spelling, written expression and other skills. Among advantages of using CBM for classroom assessment are that these measures are quick and efficient to administer; align with the curriculum of most schools; have good ‘technical adequacy’ as academic assessments; and use standard procedures to prepare materials, administer, and score (Hosp, Hosp & Howell, 2007).
The assessment tools selected for progress monitoring should be specific to the skills being measured. CBMs are a frequently used tool for progress monitoring. For example, in reading, an appropriate progress monitoring tool would target the specific essential element(s) of reading with which an individual student is having difficulty, such as phonemic awareness, phonics, fluency, vocabulary and/or comprehension.

**Response to Intervention**

**Description:**
Worksheet contains either single-skill or multiple-skill problems.

---

**CBM Math Computation**

**Administration:**
Can be administered to groups (e.g., whole class).
Students have 2 minutes to complete worksheet.

**Scoring:**
Students get credit for each correct digit—a method that is more sensitive to short-term student gain.

---

**Curriculum-Based Assessment Mathematics Multiple-Skills Computation Probe: Student Copy**

<table>
<thead>
<tr>
<th>Date: ____________________</th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>50</th>
<th>677</th>
</tr>
</thead>
<tbody>
<tr>
<td>+20</td>
<td>-151</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>31</th>
<th>71</th>
</tr>
</thead>
<tbody>
<tr>
<td>x21</td>
<td>+26</td>
</tr>
</tbody>
</table>

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Response to Intervention

Curriculum-Based Measurement: Advantages as a Set of Tools to Monitor RTI/Academic Cases

- **Aligns** with curriculum-goals and materials
- Is **reliable** and **valid** (has ‘technical adequacy’)
- Is **criterion-referenced**: sets specific performance levels for specific tasks
- Uses **standard procedures** to prepare materials, administer, and score
- Samples student performance to give objective, observable ‘low-inference’ information about student performance
- Has **decision rules** to help educators to interpret student data and make appropriate instructional decisions
- Is **efficient** to implement in schools (e.g., training can be done quickly; the measures are brief and feasible for classrooms, etc.)
- Provides data that can be converted into **visual displays** for ease of communication

Among other areas, CBM Techniques have been developed to assess:

- Reading fluency
- Reading comprehension
- Math computation
- Writing
- Spelling
- Phonemic awareness skills
- Early math skills
Curriculum-Based Measurement: Example

Example: Mr. Jackson, a 3rd-grade teacher, decided to use explicit time drills to help his student, Andy, become more fluent in his multiplication math facts. Prior to starting the intervention, Mr. Jackson administered a CBM math computation probe (single-skill probe; multiplication facts from 0 to 12) on three consecutive days. Mr. Jackson used the median, or middle, score from these three assessments as baseline—finding that the student was able to compute an average of 20 correct digits in two minutes. He also set a goal that Andy would increase his computation fluency on multiplication facts by 3 digits per week across the 5-week intervention, resulting in an intervention goal of 35 correct digits.
Combining Classroom Monitoring Methods

- Often, methods of classroom data collection and progress-monitoring can be combined to track a single student problem.

- Example: A teacher can use a rubric (checklist) to rate the quality of student work samples.

- Example: A teacher may keep a running tally (behavioral frequency count) of student callouts. At the same time, the student may be self-monitoring his rate of callouts on a Daily Behavior Report Card (rating scale).
“…One way I have used the Maze in the past at the secondary level, is as a targeted screener to determine an instructional match between the student and the text materials. By screening all students on one to three Maze samples from the text and/or books that were planned for the course, we could find the students who could not handle the materials without support (study guides, highlighted texts, alternative reading material). …This assessment is efficient and it seems quite reliable in identifying the potential underachievers, achievers, and overachievers. The real pay back is that success can be built into the courses from the beginning, by providing learning materials and supports at the students' instructional levels.”

Lynn Pennington, Executive Director, SSTAGE
(Student Support Team Association for Georgia Educators)
Activity: Classroom Methods of Data Collection

In your teams: Select one of the methods of data collection discussed in this section of the workshop that you are most interested in having your school adopt or improve.

- Discuss how you might promote the use of this data collection method, e.g.,
  - Creating assessment materials for teachers
  - Arranging for teacher training
  - Having teachers pilot the method and provide feedback on how to improve.

Classroom Data Sources:
- Existing data
- Global skill checklist
- Behavioral frequency count/behavior rate
- Rating scales
- Academic skills:
  - Cumulative mastery log
  - Work products
  - Behavior log
  - Curriculum-based measurement

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Placing Data in a ‘Data Context’

Focus of Inquiry: What simple organizing tool can teachers use to help them to structure their data collection—to include baseline, goal, and progress-monitoring?
The Structure of Data Collection pp. 31-35

- Teachers can use a wide variety of methods to assess student academic performance or behavior.
- However, data collection should be structured to include these elements: **baseline**, **the setting of a goal for improvement**, and **regular progress-monitoring**.
- The structure of data collection can be thought of as a glass into which a wide variety of data can be ‘poured’.
Classroom Data Collection Methods: Examples

- Existing data
- Global skill checklist
- Behavioral frequency count/behavior rate
- Rating scales
- Academic skills: Cumulative mastery log
- Work products
- Behavior log
- Curriculum-based measurement
RTI Classroom Progress-Monitoring Worksheet

Student: ___________________  Teacher: ___________________  Classroom or Course: ___________________

A. Identify the Student Problem: Describe in clear, specific terms the student's academic or behavioral problem:

B. Select a Data Collection Method: Choose a method of data collection to measure whether the classroom intervention actually improves the identified student problem (e.g., curriculum-based measurement, etc.).

How frequently will this data be collected?: ______ times per ______

C. Collect Data to Calculate Baseline: What method from the choices below will be used to estimate the student's baseline (starting) performance? (NOTE: Generally, at least 3-5 baseline data points are recommended.)
   - From a total of ______ observations, select the median value.
   - Other ______ observations, calculate the mean value.

<table>
<thead>
<tr>
<th>Baseline</th>
<th>3. Date: <strong>/</strong>/__  Obsv: ____________</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Date: <strong>/</strong>/__  Obsv: ____________</td>
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<tr>
<td>2. Date: <strong>/</strong>/__  Obsv: ____________</td>
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</tbody>
</table>

Baseline Performance: Based on the method selected above, it is calculated that the student's baseline performance is:

D. Determine Intervention Timespan: The intervention will last ______ instructional weeks and end on __/__/__.

E. Set a Performance Goal: What goal is the student expected to achieve if the intervention is successful? At the end of the intervention, is it predicted that the student will reach this performance goal?

F. Decide How Student Progress is to Be Summarized: Select a method for summarizing student progress (outcome) attained when the intervention ends. Student progress at the end of the intervention is to be summarized by:
   - Selecting the median value from the final ______ data points (e.g., 3).
   - Computing the mean value from the final ______ data points (e.g., 3).
   - [For time-series graphs]: Calculating the value on the graph trend line at the point that it intercepts the intervention end date.

<table>
<thead>
<tr>
<th>Progress-Monitoring</th>
<th>5. Date: <strong>/</strong>/__  Obsv: ____________</th>
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</thead>
<tbody>
<tr>
<td>1. Date: <strong>/</strong>/__  Obsv: ____________</td>
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<td>2. Date: <strong>/</strong>/__  Obsv: ____________</td>
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<td>3. Date: <strong>/</strong>/__  Obsv: ____________</td>
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<td>4. Date: <strong>/</strong>/__  Obsv: ____________</td>
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<td>8. Date: <strong>/</strong>/__  Obsv: ____________</td>
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<tr>
<td>9. Date: <strong>/</strong>/__  Obsv: ____________</td>
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</table>
Example: Mrs. Braniff, a 3rd-grade teacher, decided to use a math time drill intervention to help her student Brian to increase his fluency with basic multiplication problems (0-9).

- To measure Brian’s progress on the intervention, Mrs. Braniff decided to use Curriculum-Based Measurement Math Computation worksheets (created on www.interventioncentral.org).
- She used the *RTI Classroom Progress-Monitoring Worksheet* to organize her data collection.
A. Identify the Student Problem: Describe in clear, specific terms the student academic or behavioral problem:


B. Select a Data Collection Method: Choose a method of data collection to measure whether the classroom intervention actually improves the identified student problem (e.g., curriculum-based measurement, etc.).


How frequently will this data be collected?: _________ times per ____________
**Response to Intervention (RTI)**

**Classroom Progress-Monitoring Worksheet**

**Student:** Brian Jones  **Teacher:** Mrs. Braniff  **Classroom or Course:** Gr 3

---

<table>
<thead>
<tr>
<th>SET-UP</th>
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</thead>
</table>

A. **Identify the Student Problem:** Describe in clear, specific terms the student academic or behavioral problem:

Need to Become Fluent in Multiplication Facts: 0 to 9

B. **Select a Data Collection Method:** Choose a method of data collection to measure whether the classroom intervention actually improves the identified student problem (e.g., curriculum-based measurement, etc.).

Curriculum-Based Measurement: 2-Minute Timed Math Computation Probes

How frequently will this data be collected?: 1 times per **Week**
C. Collect Data to Calculate Baseline: What method from the choices below will be used to estimate the student's baseline (starting) performance? (NOTE: Generally, at least 3-5 baseline data points are recommended.)

- From a total of ____ observations, select the **median** value.
- From a total of ____ observations, calculate the **mean** value.
- Other: ____________________________

<table>
<thead>
<tr>
<th>Baseline</th>
<th>3. Date: <strong>/</strong>/___ Obsv: __________</th>
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<tbody>
<tr>
<td>1. Date: <strong>/</strong>/___ Obsv: __________</td>
<td>4. Date: <strong>/</strong>/___ Obsv: __________</td>
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<tr>
<td>2. Date: <strong>/</strong>/___ Obsv: __________</td>
<td>5. Date: <strong>/</strong>/___ Obsv: __________</td>
</tr>
</tbody>
</table>

Baseline Performance: Based on the method selected above, it is calculated that the student's baseline performance is: ____________________________
Baseline: Defining the Student Starting Point

- Baseline data provide the teacher with a snapshot of the student’s academic skills or behavior before the intervention begins.

- An estimate of baseline is essential in order to measure at the end of the intervention whether the student made significant progress.

- Three to five data-points are often recommended—because student behavior can be variable from day to day.
Baseline: Using the Median Score
If several data points are collected, the middle, or median, score can be used to estimate student performance. Selecting the median can be a good idea when student data is quite variable.

<table>
<thead>
<tr>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Date: <em>2</em>/ <em>3</em>/ <em>10</em>_ Obsv: <em><strong>13</strong></em></td>
</tr>
<tr>
<td>2. Date: <em>2</em>/ <em>5</em>/ <em>10</em>_ Obsv: <em><strong>15</strong></em></td>
</tr>
<tr>
<td>3. Date: <em>2</em>/ <em>6</em>/ <em>10</em>_ Obsv: <em><strong>11</strong></em></td>
</tr>
<tr>
<td>4. Date: <em><strong>/</strong></em>/___ Obsv: ________________</td>
</tr>
<tr>
<td>5. Date: <em><strong>/</strong></em>/___ Obsv: ________________</td>
</tr>
</tbody>
</table>
Baseline: Using the Mean Score

If several data points are collected, an average, or mean, score can be calculated by adding up all baseline data and dividing by the number of data points.

<table>
<thead>
<tr>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Date: <em>2</em>/ <em>3</em>/ <em>10</em> Obsv: <em><strong>13</strong></em>_</td>
</tr>
<tr>
<td>2. Date: <em>2</em>/ <em>5</em>/ <em>10</em> Obsv: <em><strong>15</strong></em>_</td>
</tr>
<tr>
<td>3. Date: <em>2</em>/ <em>6</em>/ <em>10</em> Obsv: <em><strong>11</strong></em>___</td>
</tr>
<tr>
<td>4. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
</tr>
<tr>
<td>5. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
</tr>
</tbody>
</table>

13 + 15 + 11 = 39
39 divided by 3 = 13
Mean = 13
C. Collect Data to Calculate Baseline: What method from the choices below will be used to estimate the student’s baseline (starting) performance? (NOTE: Generally, at least 3-5 baseline data points are recommended.)

- From a total of 3 observations, select the **median** value.
- Other: ________________________________
- From a total of _____ observations, calculate the **mean** value.

<table>
<thead>
<tr>
<th>Baseline</th>
<th>3. Date: _<em>11</em>/_<em>21</em>/2011 Obsv: <strong>34</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Date: _<em>11</em>/_<em>14</em>/2011 Obsv: <strong>31</strong></td>
<td>4. Date: <strong><strong>/</strong></strong>/____ Obsv: _______</td>
</tr>
<tr>
<td>2. Date: _<em>11</em>/_<em>17</em>/2011 Obsv: <strong>28</strong></td>
<td>5. Date: <strong><strong>/</strong></strong>/____ Obsv: _______</td>
</tr>
</tbody>
</table>

Baseline Performance: Based on the method selected above, it is calculated that the student’s baseline performance is: ___________ 31 Correct Digits in 2 minutes ___________
D. Determine Intervention Timespan: The intervention will last _____ instructional weeks and end on ____/____/____.

E. Set a Performance Goal: What goal is the student expected to achieve if the intervention is successful? At the end of the intervention, it is predicted that the student will reach this performance goal:

F. Decide How Student Progress is to Be Summarized: Select a method for summarizing student progress (‘outcome’) attained when the intervention ends. Student progress at the end of the intervention is to be summarized by:
   - Selecting the median value from the final ____ data-points (e.g., 3).
   - Computing the mean value from the final ____ data-points (e.g., 3).
   - [For time-series graphs]: Calculating the value on the graph trend line at the point that it intercepts the intervention end date.

G. Evaluate the Intervention Outcome:
   At the end of the intervention, compare student progress to goal. If actual progress meets or exceeds goal, the intervention is judged successful.
   
   The student’s ACTUAL Progress (Step F) is:

   The PERFORMANCE GOAL for improvement (Step E) is:

<table>
<thead>
<tr>
<th>Progress-Monitoring</th>
<th>5. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</th>
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</thead>
<tbody>
<tr>
<td>1. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
<td>6. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
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<tr>
<td>2. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
<td>7. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
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<tr>
<td>3. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
<td>8. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
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<tr>
<td>4. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
<td>9. Date: <strong><strong>/</strong></strong>/____ Obsv: ____________</td>
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</tbody>
</table>
Intervention ‘Timespan’: How Long is Long Enough?

Any intervention should be allowed sufficient time to demonstrate whether it is effective. The limitation on how quickly an intervention can be determined to be ‘effective’ is usually the sensitivity of the measurement tools. As a rule, behavioral interventions tend to show effects more quickly than academic interventions—because academic skills take time to increase, while behavioral change can be quite rapid.

A good rule of thumb for classroom interventions is to allow 4-8 instructional weeks to judge the intervention.

D. Determine Intervention Timespan: The intervention will last ______ instructional weeks and end on ___/___/____

D. Determine Intervention Timespan: The intervention will last 6 instructional weeks and end on 1/13/2012
E. Set a Performance Goal: What goal is the student expected to achieve if the intervention is successful?

At the end of the intervention, it is predicted that the student will reach this performance goal:

**Performance Goal**

The outcome goal for an intervention can be estimated in several ways:

- If there are research academic norms or local norms available (e.g., DIBELS), these can be useful to set a goal criterion.
- The teacher can screen a classroom to determine average performance.
- The teacher can select 3-4 ‘typical’ students in the class, administer an academic measure (e.g., curriculum-based measurement writing) to calculate a ‘micro-norm’.
- The teacher can rely on ‘expert opinion’ of what is a typical level of student performance.

www.interventioncentral.org
E. Set a Performance Goal: What goal is the student expected to achieve if the intervention is successful?

At the end of the intervention, it is predicted that the student will reach this performance goal:

_____ 40 Correct Digits in 2 minutes
F. Decide How Student Progress is to Be Summarized: Select a method for summarizing student progress (‘outcome’) attained when the intervention ends. **Student progress at the end of the intervention is to be summarized by:**

- Selecting the **median** value from the final ____ data-points (e.g., 3).

- Computing the **mean** value from the final ____ data-points (e.g., 3).

- [For time-series graphs]: Calculating the **value on the graph trend line** at the point that it intercepts the intervention end date.
F. Decide How Student Progress is to Be Summarized: Select a method for summarizing student progress (‘outcome’) attained when the intervention ends. Student progress at the end of the intervention is to be summarized by:

- Selecting the **median** value from the final ____ data-points (e.g., 3).

- Computing the **mean** value from the final 2 data-points (e.g., 3).

- [For time-series graphs]: Calculating the **value on the graph trend line** at the point that it intercepts the intervention end date.
G. Evaluate the Intervention Outcome:

At the end of the intervention, compare student progress to goal. If actual progress meets or exceeds goal, the intervention is judged successful.

<table>
<thead>
<tr>
<th>The student’s ACTUAL Progress (Step F) is:</th>
</tr>
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</table>

<table>
<thead>
<tr>
<th>The PERFORMANCE GOAL for improvement (Step E) is:</th>
</tr>
</thead>
</table>
## Progress-Monitoring

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<table>
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<th></th>
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<tbody>
<tr>
<td><strong>1.</strong></td>
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<td>Obsv: <em>34</em>__</td>
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<td><strong>3.</strong></td>
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<td>Obsv: <em>35</em>__</td>
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<td><strong>4.</strong></td>
<td>Date: <em>12</em>/ <em>22</em>/ 2011</td>
<td>Obsv: <em>39</em>__</td>
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<td><strong>6.</strong></td>
<td>Date: <em>01</em>/ <em>13</em>/ 2012</td>
<td>Obsv: <em>43</em>__</td>
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<tr>
<td><strong>7.</strong></td>
<td>Date: <strong><strong>/</strong></strong>/____</td>
<td>Obsv: ______</td>
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<td><strong>8.</strong></td>
<td>Date: <strong><strong>/</strong></strong>/____</td>
<td>Obsv: ______</td>
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<tr>
<td><strong>9.</strong></td>
<td>Date: <strong><strong>/</strong></strong>/____</td>
<td>Obsv: ______</td>
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</table>
G. Evaluate the Intervention Outcome:

At the end of the intervention, compare student progress to goal. If *actual progress* meets or exceeds *goal*, the intervention is judged successful.

<table>
<thead>
<tr>
<th>The student’s ACTUAL Progress (Step F) is:</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>The PERFORMANCE GOAL for improvement (Step E) is:</td>
<td>40</td>
</tr>
</tbody>
</table>
RTI Classroom Progress-Monitoring Worksheet

Student: ___________________  Teacher: ___________________  Classroom or Course: ___________________

A. Identify the Student Problem: Describe in clear, specific terms the student academic or behavioral problem:
   ___________________

B. Select a Data Collection Method: Choose a method of data collection to measure whether the classroom intervention actually improves the identified student problem (e.g., curriculum-based measurement, etc.).
   ___________________

   How frequently will this data be collected? ________ times per ________.

C. Collect Data to Calculate Baseline: What method from the choices below will be used to estimate the student’s baseline (starting) performance? (NOTE: Generally, at least 3-5 baseline data points are recommended.)
   □ From a total of ________ observations, select the median value.
   □ From a total of ________ observations, calculate the mean value.
   ___________________

   Baseline
   1. Date: ________  Obsv: ________
   2. Date: ________  Obsv: ________
   3. Date: ________  Obsv: ________
   4. Date: ________  Obsv: ________
   5. Date: ________  Obsv: ________

   Baseline Performance: Based on the method selected above, it is calculated that the student’s baseline performance is: ________

D. Determine Intervention Timespan: The intervention will last ________ instructional weeks and end on ________.

E. Set a Performance Goal: What goal is the student expected to achieve if the intervention is successful?
   At the end of the intervention, it is predicted that the student will reach this performance goal: ________

F. Decide How Student Progress is to Be Summarized: Select a method for summarizing student progress (outcome) attained when the intervention ends. Student progress at the end of the intervention is to be summarized by:
   □ Selecting the median value from the final ________ data-points (e.g., 3).  
   □ Computing the mean value from the final ________ data-points (e.g., 3).  
   □ [For time-series graphs]: Calculating the value on the graph trend line at the point that it intersects the intervention end date.  

   Progress-Monitoring
   1. Date: ________  Obsv: ________
   2. Date: ________  Obsv: ________
   3. Date: ________  Obsv: ________
   4. Date: ________  Obsv: ________
   5. Date: ________  Obsv: ________
   6. Date: ________  Obsv: ________
   7. Date: ________  Obsv: ________
   8. Date: ________  Obsv: ________
   9. Date: ________  Obsv: ________

G. Evaluate the Intervention Outcome:
   At the end of the intervention, compare student progress to goal. If actual progress meets or exceeds goal, the intervention is judged successful.

   The student's ACTUAL Progress (Step F) is: ________
   The PERFORMANCE GOAL for improvement (Step E) is: ________
Mr. Brady, a 3rd grade teacher, plans an intervention for his student, Veronica, who lacks mastery of Grade 1 sight words.

Mr. Brady plans to monitor Veronica’s sight word recognition weekly, using curriculum-based measurement (CBM) Word Reading Fluency probes from EasyCBM.

With this information, fill out sections A and B of the RTI Classroom Progress-Monitoring Worksheet.
RTI Classroom Progress-Monitoring Worksheet

Student: Veronica Anderson  Teacher: Mr. Brady  Classroom or Course: Gr 3

A. Identify the Student Problem: Describe in clear, specific terms the student academic or behavioral problem:
Lack of Mastery of Grade 1 Sight Words

B. Select a Data Collection Method: Choose a method of data collection to measure whether the classroom intervention actually improves the identified student problem (e.g., curriculum-based measurement, etc.).
CBM: 1-Minute Word Reading Fluency Probes at Grade 1 from EasyCBM

How frequently will this data be collected?: 1 times per Week
Mr. Brady decides that he will collect 3 baseline data-points on Veronica. He also plans to take the median of those baseline data-points.

With this information, fill out section C of the *RTI Classroom Progress-Monitoring Worksheet*, including calculating the actual baseline figure.

### Baseline Data for Veronica

<table>
<thead>
<tr>
<th>Date</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/13/2012</td>
<td>8</td>
</tr>
<tr>
<td>1/17/2012</td>
<td>12</td>
</tr>
<tr>
<td>1/20/2012</td>
<td>9</td>
</tr>
</tbody>
</table>
C. Collect Data to Calculate Baseline: What method from the choices below will be used to estimate the student’s baseline (starting) performance? (NOTE: Generally, at least 3-5 baseline data points are recommended.)

- From a total of 3 observations, select the **median** value.
- Other: _______________________

- From a total of _____ observations, calculate the **mean** value.

<table>
<thead>
<tr>
<th>Baseline</th>
<th>3. Date: <strong>1/20/2012</strong> Obsv: <strong>9</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Date: <strong>1/13/2012</strong> Obsv: <strong>8</strong></td>
<td></td>
</tr>
<tr>
<td>2. Date: <strong>1/17/2012</strong> Obsv: <strong>12</strong></td>
<td></td>
</tr>
<tr>
<td>4. Date: <strong><strong>/</strong></strong>/____ Obsv: _____</td>
<td></td>
</tr>
<tr>
<td>5. Date: <strong><strong>/</strong></strong>/____ Obsv: _____</td>
<td></td>
</tr>
</tbody>
</table>

Baseline Performance: Based on the method selected above, it is calculated that the student’s baseline performance is: 9 Correctly Read Words in 1 Minute
RTI Classroom Progress-Monitoring Worksheet

The teacher decides that the intervention for Veronica will last 7 instructional weeks, ending on Friday March 9, 2012.

Mr. Brady also consults Word Reading Fluency norms from easyCBM and decides to set an outcome goal for Veronica (at the end of the intervention) of 23 Correctly Read Words.

With this information, fill out sections D & E of the RTI Classroom Progress-Monitoring Worksheet.
D. Determine Intervention Timespan: The intervention will last 7 instructional weeks and end on 3/9/2012.

E. Set a Performance Goal: What goal is the student expected to achieve if the intervention is successful?

At the end of the intervention, it is predicted that the student will reach this performance goal:

23 Correctly Read Words in 1 Minute
Mr. Brady decides that he will summarize Veronica’s progress by taking the median of the final 3 progress-monitoring observations. Progress-monitoring data appear to the right. With this information, fill out the remaining sections of the RTI Classroom Progress-Monitoring Worksheet.

<table>
<thead>
<tr>
<th>Progress-Monitoring Data for Veronica</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Date</strong></td>
</tr>
<tr>
<td>1/25/2012</td>
</tr>
<tr>
<td>2/1/2012</td>
</tr>
<tr>
<td>2/7/2012</td>
</tr>
<tr>
<td>2/14/2012</td>
</tr>
<tr>
<td>2/22/2012</td>
</tr>
<tr>
<td>2/29/2012</td>
</tr>
<tr>
<td>3/7/2012</td>
</tr>
</tbody>
</table>
Response to Intervention

RTI Classroom Progress-Monitoring Worksheet

G. Evaluate the Intervention Outcome
At the end of the intervention, compare student progress to goal. If actual progress meets or exceeds goal, the intervention is judged successful.

The student’s ACTUAL Progress (Step F) is: 22

The PERFORMANCE GOAL for improvement (Step E) is: 23

<table>
<thead>
<tr>
<th>Progress-Monitoring</th>
<th>5. Date: 2/22/2012 Obsv: 22__</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Date: 1/25/2012  Obsv: 12__</td>
<td>6. Date: 2/29/2012 Obsv: 26__</td>
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<td>2. Date: 2/1/2012   Obsv: 9__</td>
<td>7. Date: 3/7/2012 Obsv: 21__</td>
</tr>
<tr>
<td>3. Date: 2/7/2012   Obsv: 14__</td>
<td>8. Date: <em><strong>/</strong></em>/___ Obsv: ________</td>
</tr>
<tr>
<td>4. Date: 2/14/2012  Obsv: 17__</td>
<td>9. Date: <em><strong>/</strong></em>/___ Obsv: ________</td>
</tr>
</tbody>
</table>
Benchmarks for Performance

Focus of Inquiry: How can research norms assist the teacher in monitoring student progress?
Research Norms: Screening for Risk

Research Norms Based on Fall/Winter/Spring Screenings.

The ideal source for performance information in any academic area is a set of high-quality research norms that:

• are predictive of student success in the targeted academic area(s)
• are drawn from a large, representative student sample
• include fall, winter, and spring norms
• provide an estimate of student risk for academic failure (e.g., that are divided into percentile tables or include score cut-offs denominating low risk/some risk/at risk).

An example of publicly available academic research norms can be found on: EasyCBM.com: http://www.easycbm.com
Example: easyCBM Cut-Points: Using Research Norms

• **Low Risk/TIER 1:** At or above the 20th percentile: Core instruction alone is sufficient for the student.

• **Some Risk/TIER 2:** 10th to 20th percentile: Student will benefit from additional intervention, which may be provided by the classroom teacher or other provider (e.g., reading teacher).

• **At Risk/TIER 3:** Below 10th percentile: Student requires intensive intervention, which may be provided by the classroom teacher or other provider (e.g., reading teacher).
### Example: easyCBM Cut-Points: Using Research Norms

<table>
<thead>
<tr>
<th>Percentile</th>
<th>Grade 3 Reading Measures</th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Word Reading Fluency</td>
<td>Fall</td>
<td>Wint</td>
<td>Sprg</td>
</tr>
<tr>
<td>10th</td>
<td>16</td>
<td>24</td>
<td>33</td>
<td></td>
</tr>
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<td>25</td>
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<td>47</td>
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</tr>
<tr>
<td>75th</td>
<td>61</td>
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</tr>
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<td>90th</td>
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<tr>
<td></td>
<td>Passage Reading Fluency</td>
<td>Fall</td>
<td>Wint</td>
<td>Sprg</td>
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<td>173</td>
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</tr>
</tbody>
</table>

Goal-Setting: Acquisition

Focus of Inquiry: When ACQUISITION is the target, how do we set individual student academic goals?
The focus of classroom interventions is often to help students to acquire a fixed set of academic-skill items (e.g., naming numbers 1-10). When the intervention supports the acquisition of a finite set of items, timelines tend to be short (e.g., 1-8 weeks) and the goal is typically mastery of all items in the academic-item set.
When ACQUISITION is the Target: How to Set Individual Student Academic Goals

1. **Select a Set of Academic Items as the Intervention Target.** The teacher decides on a finite set, or 'pool', of academic items to be targeted in the intervention. Examples of possible academic-item sets suitable for intervention are naming of all mixed-case letters; answering 2-term multiplication math facts 0-12; and giving definitions for 20 key biology terms.
2. **Establish Criteria for Item Mastery.** The teacher next defines the criteria that allow him or her to judge when the student has mastered any particular item from the academic-item pool. Along with the expectation of a *correct* response, mastery criteria usually include expectations for *speed* of responding.

Creating criteria for determining item mastery is useful because these criteria allow the teacher both to be more consistent and to have greater confidence in judging whether a particular item has been mastered.
When ACQUISITION is the Target: How to Set Individual Student Academic Goals

2. Establish Criteria for Item Mastery-Cont. As an example of criteria for item mastery, a first-grade teacher decides that mastery on a mixed-case letter-naming intervention should be defined as: "When shown a flash-card with an upper- or lower-case letter, the student will correctly name the letter within 3 seconds."
When ACQUISITION is the Target: How to Set Individual Student Academic Goals

3. **Collect Baseline Data.** Before beginning the intervention, the teacher determines the student's baseline level of performance. The easiest way to collect baseline data is to present each of the items from the item-pool to the student in random order, have the student respond, apply the mastery criteria (developed in the previous step) to determine whether each item is correct or incorrect, and record the student's responses.
3. **Collect Baseline Data-Cont.** TIP: If a student tends to have a high degree of variability in responding—e.g., on some days the student answers items correctly and on other days he or she gets those same items wrong—the teacher may want to inventory the student's skills across 2-3 successive days and count as 'known' for baseline only those items the student can correctly answer across all sessions.
3. **Collect Baseline Data-Cont.** For example, a first-grade teacher collects baseline data by showing her student flash-cards with all 52 mixed-case letters while applying her mastery criteria: The teacher sorts each card whose letter the student can correctly name within 3 seconds into a 'known' pile and sorts into an 'unknown' pile those flash-cards that the student identifies incorrectly or hesitates in responding beyond 3 seconds. At the end of the session, the teacher tallies the student's responses and discovers that at baseline he can correctly identify 38 of a possible 52 mixed-case letters.
4. **Set an Intervention Exit Goal.** The teacher next sets a student exit goal that defines a successful intervention. In most cases, the teacher will probably decide that the intervention is to be judged a success when the student has met the standard for mastery on all items in the academic-item pool.

The first-grade teacher in our example sets the student’s exit goal as accurate and fluent identification of all mixed-case letters.
5. **Decide on the Frequency and Session Length of the Intervention.** The teacher decides how long each intervention session is to last and how many intervention sessions the student will receive per week. For students with mild academic deficits, intervention sessions can be as short as 20 minutes per day, 3 days per week. For students with greater deficits, intervention sessions may last 30-45 minutes per session and occur as often as 4-5 days per week.
6. **Set a Timespan for the Intervention.** The teacher estimates the number of instructional weeks the intervention should be attempted and sets an end-date by which the student is predicted to attain success. An intervention that targets the student's acquisition of a specific set of academic items is typically of short duration: between 1 and 8 instructional weeks.
When ACQUISITION is the Target: How to Set Individual Student Academic Goals

6. **Set a Timespan for the Intervention-Cont.** Predicting how long an acquisition intervention should last is more of an art than a science. The teacher must exercise professional judgment, selecting a timespan that is both ambitious and realistic.

The frequency and session length of a particular intervention will affect the timespan. For example, a student whose intervention is scheduled at a higher 'dosage' (e.g., daily for 40-minute sessions) can be expected to reach the exit goal faster than a similar student whose intervention is at a lower 'dosage' (e.g., 3 times per week for 20-minute sessions).
7. **Monitor the Student's Progress.** Throughout the intervention, the teacher can monitor the student's progress periodically (e.g., weekly or even more frequently) by having the student attempt all of the items in the item-pool and recording the results.

For example, the first-grade teacher whose intervention targets a student's letter-naming skills for mixed-case letters measures her student's progress by reviewing all 52 letter flash-cards once per week and, each time, tracking the number of letters that the student is able to name correctly within 3 seconds of being shown the flash-card.
RTI Challenge: For Acquisition Skills, Determining ‘Mastery’

- Discuss at your tables how to set a consistent standard for judging student **mastery** of skills involving sets of academic items such as letter identification and sight-word recognition.

When judging an item as ‘mastered’:

- (1) How quickly should the student be able to correctly identify that item?
- (2) How many times in succession should the student be able to correctly identify that item in the same session?
- (3) Across how many sessions should the student repeat this performance?
Charting Data

Focus of Inquiry: How can progress-monitoring data be converted to a visual display to help teachers to make instructional and intervention decisions?
Progress monitoring involves the following steps*:

1. Establish a benchmark for performance and plot it on a chart (e.g., “read orally at grade level 40 words per minute by June”). It must be plotted at the projected end of the instructional period, such as the end of the school year.

2. Establish the student’s current level of performance (e.g., “20 words per minute”).

3. Draw an aim line from the student’s current level to the performance benchmark. This picture represents the slope of progress required to meet the benchmark.

4. Monitor the student’s progress frequently (e.g., every Monday). Plot the data.

5. Analyze the data on a regular basis, applying decision rules (e.g., “the intervention will be changed after six data points that are below the aimline”).

6. Draw a trend line to validate that the student’s progress is adequate to meet the goal over time.

*Oregon Department of Education, Office of Student Learning and Partnership (Revised December 2007) Identification of Students with Learning Disabilities under the IDEA 2004, Technical Assistance to School Districts, Oregon Response to Intervention

ChartDog GraphMaker

Provides teachers with a tool to create single-subject time-series graphs. The free application allows the user to save his or her data and store online. ChartDog also allows the user to:

- enter up to four data series on one graph
- enter and label phase changes
- set goal-lines and aimlines
- compute trend-lines for any data series by phase
- compute percentage of non-overlapping data points
- compute No-Assumptions Effect Size (NAES) between 2 phases
John: Math Computation Speed

Correct Digits Per 2 Minutes

- Baseline
- Time Drills
- Intervention Goal
- Aimline

Instructional Days:

- 2011-11-11 Fri
- 2011-11-08 Tue
- 2011-11-03 Thu
- 2011-10-31 Mon
- 2011-10-28 Fri
- 2011-10-25 Tue
- 2011-10-22 Sat
- 2011-10-19 Wed
- 2011-10-16 Sun
- 2011-10-13 Thu
- 2011-10-10 Mon
- 2011-10-04 Tue
- 2011-09-01 Sat
- 2011-09-28 Wed
Response to Intervention

Review the ‘Quality Indicators for Progress-Monitoring’ below from the New York State RTI Guidance Document. Decide on 2-3 key ‘next steps’ that you would like to take to make use of the resources / recommendations on data collection shared at today’s workshop.

Quality Indicators for Progress Monitoring

- Progress monitoring of student performance occurs across all tiers.
- Teachers follow a designated procedure and schedule for progress monitoring.
- Measures are appropriate to the curriculum, grade level and tier level.
- Data from progress monitoring are documented and analyzed.
- A standardized benchmark is used to measure progress and determine progress sufficiency.
- Teachers use progress monitoring to inform instructional effectiveness and the need for changes in instruction or intervention.
- Graphs are used to display data for analysis and decision making.
- Staff receive training in the administration and interpretation of progress monitoring measures and the implications for instruction.
- The district has designated reasonable cut points, and decision rules of the level, slope or percentage of mastery to help determine responsiveness and distinguish adequate from inadequate responsiveness.
- When monitoring the progress of LEP/ELL students, the student’s progress is compared with the levels of progress demonstrated by peers from similar cultural and linguistic backgrounds who have received the interventions.