Assessment/
Progress Monitoring
Assessment/Progress Monitoring

How to Use This Section:

This section contains some resources and information:

- Problem Solving Team Flow Chart
- Assessment Graphic Organizer – Good for determining building level assessment structure
- Literacy Assessment Information
- Math Assessment Information
- Excellent Articles:
  - *Progress Monitoring Within a Multi-Level Prevention System* By Lynn S. Fuchs
  - *Classroom Reading Instruction That Supports Struggling Readers* By Carolyn A. Denton
**Problem Solving Team (PST) Flow Chart**

**What we do when a child is not responding**

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**A** Educator/Parent has an academic or behavioral concern about a student. **Parent** is informed. Collection of Body of Evidence begins. Body of Evidence includes **Interventions**, **Progress Monitoring** and **Data Analysis**.

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**B** Teacher collaborates with grade level team/relevant staff to identify **Interventions** and/or accommodations that may help the student begin to succeed at expected level. **Document Tier I Interventions, Progress Monitoring** and **Data Analysis**. **Keep Parents informed**.

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Interventions are successful.

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**C** PST referral is completed and turned into PST Coordinator. PST Coordinator schedules a meeting.

---

Teacher invites parents to meeting.

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**D** A PST Team Member is assigned to the student. The Team Member meets with the referring teacher to collect all necessary data and clarify the concern before the student’s initial PST meeting.

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**E** PST meeting - Tier II intervention plan is developed. Parents are included. The plan is distributed to necessary staff. Review meeting is scheduled.

---

Plan Implementation (3 to 6 Weeks): **Intervention**, **Progress Monitoring**, **Data Analysis**

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**F** PST Review meeting is held. Body of Evidence is analyzed and **Interventions** are continued or modified as necessary. Progress Monitoring and plan are communicated to necessary staff. Parents are again included.

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New plan implementation (3 to 6 Weeks): **Intervention**, **Progress Monitoring**, **Data Analysis** continue.

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**G** Student moves to Tier III. An intensive support intervention plan is developed by the PST. **Interventions** will be reviewed regularly to ensure the student’s needs are being met.

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**H** PST agrees that referral to special education is warranted. PST completes Special Education Referral form in IC and forwards the referral to the building level special education team for consideration.

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For 1-5% of students, modifications may be needed.

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Students with severe medical, physical, or cognitive disabilities may be referred directly for special education evaluation upon the school becoming aware of their level of need.

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Tier II interventions are successful. Interventions are continued and/or weaned off as appropriate.
Assessment Graphic Organizer

Purpose:
1. To improve student achievement and close the achievement gap.
2. A tool for schools to use to better understand the use of their assessments.
3. A tool for schools to identify their assessment structures.

Response to Intervention – CDE’s Assessment Objectives:
- To identify students at the beginning of the year who are at-risk or who are experiencing difficulties and who may need extra instruction or intensive interventions if they are to progress toward grade-level standards by the end of the year, as well as students who have reached benchmarks and who need to be challenged.
- To monitor students’ progress during the year to determine whether at-risk students are making adequate progress in critical skills and to identify any students who may be falling behind or need to be challenged.
- To inform instructional planning in order to meet the most critical needs of individual students.
- To evaluate whether the instruction or intervention provided is powerful enough to help all students achieve grade-level standards by the end of the year.
<table>
<thead>
<tr>
<th>Assessment Type</th>
<th>What is its purpose?</th>
<th>When is it administered?</th>
<th>Who is it designed by?</th>
<th>How does it inform instruction?</th>
</tr>
</thead>
</table>
| Screening:      | Quick and efficient measures of overall ability and critical skills  
                  • Initial Baseline data |                         |                        |                                |
## Progress Monitoring:
Brief, given periodically to determine adequate progress:
- Determine rate of progress
- Determine effectiveness of intervention
- Identify need for additional information
- Analyze and interpret gaps between ELR’s and achievement
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Diagnostic Assessments:</td>
<td>- Formal assessments</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>- Provides information not available in screening or progress monitoring</td>
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<tr>
<td>Assessment Type</td>
<td>What is its purpose?</td>
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<td>-----------------</td>
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</tr>
<tr>
<td><strong>Outcome Assessments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Group administered</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>• Given at end of year</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>• School, district or state reporting purposes</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>• Assesses overall effectiveness of instructional program</td>
<td></td>
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</tr>
</tbody>
</table>
## Attributes of a Quality Literacy Intervention Program

<table>
<thead>
<tr>
<th>Qualities</th>
<th>Is this being done?</th>
<th>If no, what should be done?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplemental to quality classroom instruction; children experiencing difficulty should spend <strong>more time</strong> receiving direct reading instruction than those who are not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinated Instruction between classroom and intervention program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designed to bring student up to grade level standard as quickly as possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered daily using a well planned, structured, and focused lesson</td>
<td></td>
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</tr>
<tr>
<td>Texts are at student's instructional level and include a variety of text types- fiction, nonfiction, narrative, informational, poetry</td>
<td></td>
<td></td>
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<tr>
<td>Weekly assessment for close supervision for shifts in learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not waste time on unnecessary activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction is delivered individually or in small groups of 3-5 students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develops fluency (repeated readings of text is a very effective approach)</td>
<td></td>
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<tr>
<td>Instruction that focuses attention on words, letters, and word patterns in context (whole, part, whole) in both reading and writing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitors and supports student understanding of text before, during and after reading</td>
<td></td>
<td></td>
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<tr>
<td>Students write daily</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention is provided by a professionally prepared, accomplished teacher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong communication between home and school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groups are flexible and students can move in and out of intervention as their needs arise</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Groups are mostly based on skill need not reading level</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Attributes of a Quality Math Intervention Program

<table>
<thead>
<tr>
<th>Qualities</th>
<th>Is this being done?</th>
<th>If no, what should be done?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Must be supplemental to quality classroom instruction; children experiencing difficulty should spend <strong>more time</strong> receiving direct math instruction than those who are not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Classroom Teachers use a mini-lesson format to teach lessons; tools (number lines on desks, etc.) are utilized frequently to help struggling students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students are monitored in classroom for the amount of information given - cognitive load</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coordinated Instruction between classroom and intervention program (consult time)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Designed to bring student up to grade level standard as quickly as possible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivered daily using a well planned, structured, and focused lesson</td>
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<td></td>
</tr>
<tr>
<td>Math concepts covered are targeted to the students needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weekly assessment are utilized for progress monitoring and to determine shifts in learning</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not waste time on unnecessary activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Instruction is delivered individually or in small groups of 3-5 students</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develops automaticity in number concepts; be explicit about the connections being made</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intervention is provided by a professionally prepared, accomplished teacher</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong communication between home and school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Students should not miss critical classroom instruction to receive intervention</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
K-5 Math Screening General Directions

These screenings are designed to help predict which students are ready for grade level work in number and computation and who needs further diagnostic assessments to determine specific areas of difficulty. Each grade level is based on key performance indicators from the previous year. The intent is for these screenings to be given to all students at the beginning of the year. They should take no more than five minutes per student.

The screenings can be re-administered to monitor progress. At the end of the year, all students may be given the screening for the following grade to assess readiness for next year.

Attached is the sheet Follow Up Add+Vantage Math Recovery Assessments. These are the strongest tools we have for assessment in number. If your building does not have the capacity for administering the follow up AVMR assessments other assessments can be substituted. Only AVMR trained teachers are certified to administer the Add+Vantage Math assessments.

The screeners, video of screeners, data collection sheets and copies of the materials are available online through the Math Common Folder.

Please contact Dara Glazer dara.glazer@bvsd.org or Susan Wojciechowski susan.wojciechowski@bvsd.org with questions or requests.
**Tips for Math Screenings**

**It is okay to...**

- re-posed the task. Verbal instructions may be rephrased if it is likely to help the child understand the task.
- ask the student to put their fingers up where you can see them if they are using their fingers to solve problems.

**Good Questions to Elicit Kids’ Thinking:**

- What number did you start with? Then what did you do?
- If the child says I counted say, “Can you do that counting out loud so I can hear?”
- If the child says I used my fingers say, “What did you do on your fingers?”

**Avoid...**

- confirming students’ answers.
- yes or no questions.
- letting students check their answers to tasks involving materials.
- temptations to talk to the student when she/he is engaged in solving a task.

**Accommodations for ELL and SPED:**

- If student is unable to do the counting tasks you can show him/her the written numeral. Say “start at 65 and count forward”. Write the numeral 65 $\rightarrow$. For backwards counting write the numeral 65 $\leftarrow$. Or, see if the student can write the numeral sequence.
- Rephrase questions as needed to assure understanding.
- Give student paper and pencil if unable to explain strategy orally.
Screening Materials

Kindergarten
Counters: 7 red and 3 blue
Numeral cards (1 page, grey)

First Grade
Counters: 8 red and 7 blue
Cards (2 pages, purple)
2 half sheets of cardstock (for covers)

Second Grade
Counters: 14 red and 9 blue
Numeral cards (1 page, green)
2 half sheets of cardstock (for covers)

Third Grade
Counters: 20 blue
Cards (1 page, orange)

Fourth Grade
Cards (2 pages, blue)

Fifth Grade
Cards (3 pages, yellow)
Number line (1 copy per student, make as needed)
Kindergarten Math Screener

Name ____________________________ Date ___________________

1. “Start counting from 1 and I’ll tell you when to stop.” (Stop at 10)
   □ fluent      □ not fluent     □ unsuccessful: counts to ______

2. Numeral Identification Cards: Place cards in front of child one at a time (not in numerical order). Say, “Read this card to me.” (check if correct; record incorrect answers)
   8 ____  5 ____  3 ____  6 ____  2 ____
   7 ____  9 ____  1 ____  4 ____  10 ____

   If child cannot name the first few numeral cards, spread them all out face up in front of the child (in random order). Ask, “Point to the 8. Point to the 5.” Continue through the numbers. Mark “R” if able to recognize the numeral.

3. Unscreeneed Collections:
   a. Put out 7 red counters randomly spaced and ask, “How many counters are there?”
      □ Correct      □ Incorrect      □ Number word sequence error
      If correct continue to 3b      □ 1 to 1 correspondence error

   b. Leave red counters where they are and add 3 blue counters randomly spaced next to the red ones. Ask, “How many are there now?”
      □ Correct      □ Number word sequence error
      □ Incorrect      □ 1 to 1 correspondence error
      □ Unable to combine two collections

General comments: (include prompts and time needed) ____________________________
1st Grade Math Screener

Name ___________________________ Date __________

Number Words and Numerals (NWN):

1. “Start counting from 1 and I’ll tell you when to stop.” (Stop at 22)
   - ☐ fluent  ☐ not fluent  ☐ unsuccessful: counts to _________

2. “Count backward from 10.”
   - ☐ fluent  ☐ not fluent  ☐ unsuccessful

3. Numeral Identification Cards
   - 8  5  12  17  20
   Place cards out one at a time. Say, “Read this card.”

Addition and Subtraction (A/S) - Unscreened Collections:

4a. Put out 8 red counters in random order and 7 blue counters next to them.
   Ask, “How many counters are there all together?”
   - ☐ Correct  ☐ Number word sequence error
   - ☐ Incorrect  ☐ 1 to 1 correspondence error
   If successful continue with 4b and 4c

Addition and Subtraction (A/S) - Screened Collections:

4b. “Here are 4 red counters” (cover). “Here are 3 blue counters” (cover). “How many counters are there all together?”
   - ☐ correct  ☐ incorrect - answer given _________
   - ☐ Student starts at 4 or 3 then counts up to 7.
   - ☐ Student holds up 4 then 3 fingers and counts 1 to 7.
   - ☐ Other.
   If not obvious, ask, “How did you work that out?”

4c. “Here are 8 red counters” (cover) “I am taking away 2” (leave the 2 counters uncovered)
   - ☐ correct  ☐ incorrect- answer given _________
   - ☐ starts at 8 and counts down 2
   - ☐ puts up 8 fingers then puts 2 fingers down
   - ☐ Other

Structuring Number to 5 (SN)

5a. Present card, ask, “How many bears are there?” Without child seeing, cover 4 bears.
   Ask, “How many bears do you see now? How many are hidden?”
   - ☐ Correct/automatic  ☐ Correct/works it out (fingers, counting, etc)  ☐ Incorrect

5b. Present card, ask, “How many bears are there?” Without child seeing, cover 2 bears.
   Ask, “How many bears do you see? How many are covered?”
   - ☐ Correct and automatic  ☐ Correct and works it out (fingers, counting, etc)  ☐ Incorrect
# 2nd Grade Math Screener

Name ___________________________ Date __________

## Number Words and Numerals (NWN)

<table>
<thead>
<tr>
<th>Initial Prompt</th>
<th>Fluent</th>
<th>Not Fluent</th>
<th>Unsuccessful: Counts to</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. “Start counting from 27 and I’ll tell you when to stop.” (Stop at 43)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. “Start counting from 86 and I’ll tell you when to stop.” (Stop at 103)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3. “Count backward from 23 and I’ll tell you when to stop.” (Stop at 12)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Numeral ID Cards: 66 [ ] 71 [ ] 90 [ ] 17 [ ] 54 [ ]

Place cards out one at a time. Ask: “What number is this?”

## Addition and Subtraction Screened Tasks with Counters (A/S)

5. “Here are 9 blue counters” (cover). “Here are 6 red counters” (cover). “How many counters are there all together?” If strategy is not obvious, ask, “How did you figure that out?”

<table>
<thead>
<tr>
<th>Correct</th>
<th>Incorrect - answer given</th>
</tr>
</thead>
</table>

Describe strategy (e.g., finger use, counting sequence):

6. Put out 14 red counters (cover). Say, “Here are 14 red counters.” Remove 3 counters (cover) Say, “I’m taking away 3.” Ask, “How many counters are left under here?” (point to first cover)

<table>
<thead>
<tr>
<th>Correct</th>
<th>Incorrect – answer given</th>
</tr>
</thead>
</table>

Describe strategy:

## Structuring Numbers: Combinations to Ten (SN)

7. “Tell me two numbers that go together to make 10.” (Prompt for addition)

<table>
<thead>
<tr>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic: works it out:</td>
</tr>
<tr>
<td>Incorrect:</td>
</tr>
</tbody>
</table>

“Tell me another two numbers that go together to make 10.”

<table>
<thead>
<tr>
<th>Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic: works it out:</td>
</tr>
<tr>
<td>Incorrect:</td>
</tr>
</tbody>
</table>

If student says 10 and 0 ask for another combination

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3rd Grade Math Screener

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
</table>

**Number Words and Numerals (NWN)**

1. “What number comes right before”:
   - 3 ____ (use as an example to clarify before and after if needed)
   - 80 ___ 61 ___ 40 ___
   - Indicate if response is automatic (✓), delayed (d), or incorrect (x)

2. Numeral Identification Cards: indicate if response is automatic (✓), delayed (d), or incorrect (x)
   - 106 ___ 212 ___ 577 ___ 1000 ___

**Multiplication and Division (M/D)**

3. “Start counting by 2s and I’ll tell you when to stop.” (Stop at 24)
   - [%] fluent [%] not fluent [%] unsuccessful: counts to ______

4. Put out a collection of 16-20 counters randomly spread out in front of the student.
   “Use these counters to make 3 groups with 5 counters in each group”
   - [%] correct [%] incorrect

**Addition and Subtraction (A/S) and Place Value (PV): no paper and pencil**

5. Place out the card.
   - “Read this card.”
   - “Work out the answer.”
   - Ask, “How did you solve it?”
     - (If duplicates written algorithm, ask “Do you have another way to work it out?”)
   - 45 + 19
     - [%] Correct (64)
     - [%] Incorrect
     - [%] Duplicates Written Algorithm
     - [%] Counts by 1’s
     - [%] Other Strategy (Elaborate)
     - [%] No Strategy

6. Present as above.
   - 50 – 24
     - [%] Correct (26)
     - [%] Incorrect
     - [%] Duplicates Written Algorithm
     - [%] Counts by 1’s
     - [%] Other Strategy (Elaborate)
     - [%] No Strategy

**Structuring Numbers: Combinations to Twenty (SN)**

7. “Tell me two numbers that go together to make 13.” (Rephrase if needed to prompt for addition)
   - _____ and _______ circle strategy: automatic works out incorrect

   “Tell me another two numbers that go together to make 13.”
   - _____ and _______ circle strategy: automatic works out incorrect
   - If successful ask, “What goes with 12 to make 20?” circle strategy: automatic works out guesses

---

AVMR assessment recommended
NWN______
A/S_______
PV_______
SN_______
4th Grade Math Screener

Name ________________________ Date ____________

Number Words and Numerals (NWN)

1. “Start counting from 996. I’ll tell you when to stop.” Stop: 1012.
   □ fluent □ not fluent □ unsuccessful: counts to ______

2. Number Word After “What number comes right after ____?”
   279 ______ 554 ______ 2009 ______
   indicate if response is automatic (√), delayed (d), or incorrect (x)

3. “Count backward from 605. I’ll tell you when to stop.” Stop: 597
   □ fluent □ not fluent □ unsuccessful: counts to ______

4. Numeral Identification Cards: indicate if response is automatic (√), delayed (d), or incorrect (x)
   1,539 ______ 2,056 ______ 4,008 ______

Multiplication and Division (M/D)

5. “How many eyes do 12 people have?”
   □ correct □ incorrect

6a. “Imagine there are 3 dots under each of these cards. How many dots are there all together?”
   □ correct □ incorrect _________
   □ relates to 6 x 3
   □ counts by threes
   □ counts by ones
   □ other: ____________________________

6b If successful ask, “Can you write a multiplication problem that goes with this?”
   (Provide student with paper and pencil.)
   □ correct □ incorrect __________________________

Place Value (PV): administer tasks without paper and pencil

7. “Count by 10’s starting at 67.”
   □ fluent □ not fluent □ unsuccessful
   Stop student at 127.

8. Place out the card 400 - 198
   “Read this card.” “Work it out.”
   “How did you solve it?”
   What does 400-198 equal?
   □ Correct (202)
   □ Incorrect _________
   □ Duplicates Written Algorithm
   □ Other Strategy (Elaborate)
   □ No Strategy

If student duplicates the written algorithm, ask, “Do you have another way of solving it.”
If unsuccessful consider presenting problems from 3rd grade screener: 50-24, 45+19

AVMR assessment recommended □
NWN _____
PV _____
M/D _____

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5th Grade Math Screener

Name ___________________________ Date ____________

Number Words and Numerals (NWN)
1. Start counting back from 1012 and I’ll tell you when to stop (stop at 997).
   □ fluent  □ not fluent  □ unsuccessful: counts to ______

2. Numeral Identification Cards: indicate if response is immediate (✓), delayed (d), or incorrect (x)
   7,691_________ 90,540_________ 40,008_________

Multiplication and Division (M/D)
3a. Show card: 8 x 7 □ automatic □ works out □ incorrect
3b. Show card: 28÷4 □ automatic □ works out □ incorrect

4a. Show card: 30 x 4
   Ask, “What is 30 times 4?”
   “How did you work it out?”
   □ Correct □ Incorrect ______
   □ Uses 3 x 4 fact to solve 30 x 4
   □ Duplicates written algorithm
   □ Other __________________

4b. If correct show card: 29 x 4
   Ask, “Can you use 30 x 4 to help you figure out 29 x 4?”
   □ Correct □ Incorrect ______
   □ Solves both problems separately
   □ Subtracts 4 from 120

Place Value (PV)
5. “How many groups of ten are in 132?” □ correct (13) □ incorrect answer ______

6. Place out the card “If you spent $16.97 and paid with $20.00 how much change would you get?”
   □ correct ($3.03) □ incorrect ______
   □ duplicates the written algorithm
   □ other __________________

   “How did you work that out?”

7. “Put a dot on the number line where these numbers go. Label the dots.” (Give student paper number line) □ correct □ incorrect
   1.5 □ 1¾ □ 3/2 □
## RTI Next-Steps Guide

### Kindergarten

<table>
<thead>
<tr>
<th>PI (screener item #)</th>
<th>Investigations</th>
<th>Teaching Number in the Classroom (AVMR)</th>
<th>DENS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PK.1b, 1c, 1d (#3)</td>
<td>Classroom Routine “Attendance” Mathematical Thinking in Kindergarten pg. 65 Classroom Routine “Counting Jar” Mathematical Thinking in Kindergarten pg. 69 Classroom Routine “Today’s Question” Mathematical Thinking in Kindergarten pg. 72</td>
<td>Chains p. 61 Give Me Five p. 62 Pass it On p. 62</td>
<td>Feather Drop Egg Carton Drop Handful of Teddies Paper Cup Drop Ten Frames Candle Holders Pendulum Swing Popstick Activities</td>
</tr>
<tr>
<td>K.1a (#2)</td>
<td>Classroom Routine “Attendance” Mathematical Thinking in Kindergarten pg. 65 Classroom Routine “Counting Jar” Mathematical Thinking in Kindergarten pg. 69 Classroom Routine “Calendar” Mathematical Thinking in Kindergarten pg. 70</td>
<td>Numbers on the Line p. 40 Stand in a Line p. 41 Can You See Me? p. 42</td>
<td>Guess the Number Price is Right Numeral Flip Strip Fences Hang it on the Line Sandwich Boards</td>
</tr>
</tbody>
</table>
## RTI Next-Steps Guide

### First Grade

<table>
<thead>
<tr>
<th>PI ( screener item #)</th>
<th>Investigations</th>
<th>Teaching Number in the Classroom (AVMR)</th>
<th>DENS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>K.1b (#1, 2)</strong></td>
<td>Classroom Routine “Attendance” Mathematical Thinking in Kindergarten pg. 65</td>
<td>Count Around p. 40</td>
<td>Zap</td>
</tr>
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Progress Monitoring Within a Multi-Level Prevention System
by Lynn S. Fuchs, Vanderbilt University

In this article, we provide a quick overview of progress monitoring and describe how progress monitoring is used within a multi-level prevention system. The companion piece to this article details validated forms of progress monitoring in both reading and mathematics.

Overview of Progress Monitoring

With progress monitoring, teachers collect student performance data on a frequent basis: usually every week, but at least every month. The teacher graphs each student's scores against days on the calendar and draws a line of best fit through the scores. This trend line, which represents weekly rate of improvement, is the rate at which the student is making progress toward achieving competence in the grade-level curriculum. Over the past 35 years, systematic research programs have been conducted to identify technically strong forms of progress monitoring. Information on validated tools for progress monitoring in reading and mathematics can be found in the companion piece to this article, as mentioned above; here, although, we focus on a recent outgrowth of these decades of research on progress monitoring—the development of multi-level prevention systems.

Overview of Multi-Level Prevention Systems

Progress monitoring is an essential tool within a multi-level prevention system. Within a multi-level prevention system, interventions of increasing intensity are allocated to students depending on their needs. The goal is to promote strong, long-term outcomes for the greatest proportion of students, without wasting more intensive and expensive interventions on students who would develop well without them. Primary prevention is the universal core program. This is conducted in general education, often with the use of individual accommodations and adaptations that are managed by the general education teacher. If primary prevention relies on a strong, research-based form of instruction, the vast majority of students can be expected to develop nicely, precluding the need for more intensive intervention. Assessment (i.e., screening) is used to identify students who are unlikely to benefit from primary prevention (i.e., the core instructional program). Sometimes, short-term progress monitoring is used to supplement screening in order to verify the group of students for whom the universal core program is in fact ineffective. We refer to these students as at-risk.
Secondary prevention is reserved for these at-risk students. Secondary prevention incorporates a greater level of intensity than can ordinarily be accomplished in general education. Secondary prevention typically is delivered in small-groups for 10–25 weeks by well-trained tutors (who are not necessarily certified teachers). In many models, secondary prevention is based on a standard protocol (i.e., a prescriptive, research-based or validated intervention). The assumption is that most students who enter Secondary prevention should benefit from a well designed, structured tutoring program that has been shown in rigorous, controlled studies to be effective for most students. In some models, multiple rounds of tutoring are attempted, sometimes with modifications configured during the second or third round of tutoring to strengthen effects. Assessment is used to determine which students make adequate progress (i.e., are responsive to secondary prevention) and which students are unresponsive and therefore need more intensive supports than can be provided with secondary prevention. Responsive students are returned to primary prevention, but progress monitoring continues to determine whether secondary prevention becomes necessary again the the future.

For the small number of students for whom secondary prevention does not prove effective, an even more intensive level of instruction, tertiary prevention), is conducted. This most intensive level of instruction typically involves instruction that is delivered individually or in pairs and that is individually designed, using ongoing progress-monitoring data. Often, it is conducted under the auspices of special education resources, using special education certified teachers who are well versed in how to use progress monitoring to individually tailor instruction. Progress monitoring is also used in tertiary prevention to determine when student response to the individualized programming is sufficiently strong so that the student might thrive within a less intensive level of the multilevel prevention system, in secondary or primary prevention. Progress monitoring continues for these students.

Progress monitoring plays four critical roles within a multi-level prevention system, as listed here and detailed in the next section:

1. Determine whether primary prevention (i.e., the core instructional program) is working for a given student.
2. Distinguish adequate from inadequate response to the secondary prevention and thereby identify students likely to have a learning disability.
3. Inductively design individualized instruction programs to optimize learning at the tertiary prevention in students who likely have learning disabilities.
4. Determine when the student’s response to tertiary prevention indicates that a return to primary or secondary prevention is possible.

**Four Critical Roles of Progress Monitoring Within a Multi-Tier Prevention System**

**Purpose 1: Identifying Students Who Require Secondary Prevention**

The first progress-monitoring function is to identify which students in a school may be at risk for poor reading outcomes. These students become the focus of secondary prevention. To identify at-risk students, a brief screening measure is administered to all students in a school or within targeted grade levels within a school. A cut-score is then determined. When students score below the cut-score, they may score poorly on a valued outcome, such as performance on the high-stakes test, at a later time. In some multilevel prevention systems, students scoring below this cutoff are designated as at risk. This screening, which relies on a one-time test administration, is not a form of progress monitoring, which requires more frequent (typically, at least monthly) assessment. Therefore, screening is not a central feature of this article. (For more information on universal screening read, Universal Screening for Reading Problems: Why and How Should We Do This?)

We note, however, that screening is important within a multilevel prevention system. We also note that one-time screening carries a significant danger of identifying students to receive secondary prevention when those students in fact would become strong readers without tutoring. For example, in a recent first-grade response-to-intervention experiment (Fuchs, Fuchs, Compton, & Davis, in press), 50% of the control group, which had been designated at risk according to one-time screening but who did not actually receive tutoring, actually developed adequate reading skills by January of first grade. These false alarms are expensive for a multilevel prevention system because they require schools to allocate costly resources to students who do not require them.

Because screening, especially at kindergarten and first grade, typically identified many false alarms, we recommend that one-time screening should constitute only the first step in designating risk and that screening be supplemented with progress monitoring. Specifically, students who are first suspected to be at risk, based on screening, should be followed with 5–8 weeks of progress monitoring while primary prevention’s general education is implemented. The purpose of this short-term progress monitoring is to gauge student response to the primary prevention, general education program and thereby confirm that the suspected risk, based on screening, probably constitutes actual risk. Such short-term progress monitoring has been shown to greatly increase the precision of designating which students actually need...
secondary prevention (Compton, Fuchs, Fuchs, & Bryant, 2006).

**Purpose 2: Determining Response to Secondary Preventative Tutoring**

Within a multilevel prevention system, a second purpose for progress monitoring occurs within secondary prevention, as tutoring is implemented. When a validated or research-based approach to reading intervention is conducted in small groups within secondary prevention, the assumption is that the vast majority of students should respond well. If a child’s response to a tutoring program, which has been shown to benefit most students, is inadequate, then the RTI process has eliminated instructional quality as a viable explanation for poor academic growth and, instead, provides evidence of a learning disability. The purpose of progress monitoring at secondary prevention is to determine whether a student’s learning in response to the validated small-group tutoring is adequate. Students who fare well (i.e., who respond) are returned to primary prevention, where progress monitoring continues to assess whether the student’s progress remains adequate once secondary prevention tutoring ends or whether the student instead requires another round of secondary prevention tutoring. To distinguish whether the intervention provided is meeting the child’s needs and helping accelerate his or her rate of learning sufficiently, cut-points based on the progress-monitoring system are required.

**Purposes 3 and 4: Designing Individualized Programs at Tertiary Prevention and Formulating Decisions About When to Exit Tertiary Prevention**

Tertiary prevention is typically conducted with special education resources and personnel. Tertiary prevention differs from secondary prevention because it is more intensive, usually involving longer sessions conducted in smaller groups, if not individually. Moreover, because the use of a standard, validated reading tutoring program has already been shown to be ineffective at secondary prevention, something more tailored to the student’s needs is warranted. For designing instructional programs that are individually tailored, two approaches are generally used: deductive and inductive approaches.

A deductive approach involves administering a battery of cognitive assessments to determine strengths and weaknesses and then designing a program to take advantage of strengths and to make up for weaknesses. Unfortunately, a deductive approach has proven difficult to design and has been shown to be largely ineffective. The alternative approach, an inductive one, relies strongly on progress monitoring. That is, an initial instructional program, based on information collected in secondary prevention is implemented. During the implementation of this instructional program, weekly progress monitoring occurs, with prescriptive decision
rules for determining whether and, if so, when the program needs to be revised. As the teacher conducts revisions to the program, ongoing progress monitoring continues, and the resulting data provide the teacher with information about which revisions accelerate student learning (and therefore should be retained and enhanced) and which program elements fail to enhance student learning (and therefore should be removed from the program). In this way, the teacher deductively designs an individualized program.

At tertiary prevention, progress monitoring also is essential for determining when the student’s response to tertiary prevention instruction is adequate to support a return to primary prevention (general education, with or without accommodations or modifications) or to secondary prevention (small-group tutoring). After exiting tertiary prevention, progress monitoring continues so that tertiary intervention can be re-initiated as needed.

In sum, progress monitoring is an essential tool within a multilevel prevention system. It is used to identify students at-risk for academic difficulty, who need to enter secondary prevention. Progress monitoring is also used at the secondary prevention level, where validated, standard tutoring programs are used. At the secondary prevention level, progress monitoring is used to gauge students’ responsiveness to that tutoring program. Students who are responsive return to primary prevention, with ongoing progress monitoring. By contrast, students who are unresponsive to the standard tutoring program have demonstrated the need for a non-standard, or individualized, instructional program. These students on to tertiary prevention, where progress monitoring is used to inductively formulate an effective, individualized instructional program and to monitoring progress, in response to that individualized instructional program. The goal is to return the student to a less intensive level of the multilevel prevention system as soon as possible, while continue to monitoring his/her progress in case a need re-emerges for tertiary prevention.

References


Classroom Reading Instruction That Supports Struggling Readers: Key Components for Effective Teaching

by Carolyn A. Denton, Children's Learning Institute, University of Texas Health Science Center Houston

The National Research Council (NRC), a group of experts convened to examine reading research and address the serious national problem of reading failure, concluded in their landmark report *Preventing Reading Difficulties in Young Children* (Snow, Burns, & Griffin, 1998) that most reading problems can be prevented by providing effective instruction and intervention in preschool and in the primary grades. The NRC noted that for students to learn to read well they must a) understand how sounds are represented by print and be able to apply this understanding to read and spell words, b) practice reading enough to become fluent readers, c) learn new vocabulary words, and d) learn to self-monitor when reading to make sure what they read makes sense and to correct their own errors. The NRC also found that it was important that teachers provide explicit instruction in phonemic awareness and phonics integrated with many opportunities to read and write meaningful, connected text. (They purposefully used the word *integrated* rather than *balanced*. It isn't enough simply to add on components of a fragmented curriculum to balance one with another.) Finally, they noted that effective reading teachers adapt their instruction, making changes designed to meet the needs of different students.

In summary, the evidence to date shows that there are five overriding research-supported characteristics of effective instruction for students with reading difficulties. This article's focus is on identifying and then exploring in more detail each of these components of powerful instruction:

1. Teach essential skills and strategies.

   ◊ *Effective reading teachers teach skills, strategies, and concepts.*
2. Provide differentiated instruction based on assessment results and adapt instruction to meet students' needs.
   ◊ Effective teachers recognize that one size doesn't fit all and are ready to adapt instruction—both content and methods.

3. Provide explicit and systematic instruction with lots of practice—with and without teacher support and feedback, including cumulative practice over time.
   ◊ Students should not have to infer what they are supposed to learn.

4. Provide opportunities to apply skills and strategies in reading and writing meaningful text with teacher support.
   ◊ Students need to be taught what to do when they get to a "hard word."

5. Don't just "cover" critical content; be sure students learn it—monitor student progress regularly and reteach as necessary.
   ◊ Effective teachers adjust their teaching accordingly to try to accelerate student progress.

Teach the Essentials

Shortly after the NRC issued its report on the serious national problem of widespread reading difficulties (Snow et al., 1998), the National Reading Panel (NRP; 2000) conducted a comprehensive analysis of existing reading research that met high standards for quality. The NRP, similarly to the NRC, concluded that reading instruction should address the domains of phonemic awareness, phonics, fluency, vocabulary, and comprehension. Effective classroom reading instruction includes teaching phonemic awareness (in kindergarten and 1st grade, and for older students who need it) and phonics or word study explicitly and directly with opportunities to apply skills in reading and writing connected text (e.g., Ehri, 2003; Rayner, Foorman, Perfetti, Pesetsky, & Seidenberg, 2001; Snow et al., 1998), with integrated instruction in fluency, vocabulary, and comprehension (e.g., Chard, Vaughn, & Tyler, 2002; Gersten, Fuchs, Williams, & Baker, 2001; Jitendra, Edwards, Sacks, & Jacobson, 2004).
Effective reading teachers teach skills, strategies, and concepts. *Skills* are things students learn to do. In reading, students must learn skills such as associating letters with their sounds (such as saying the sound of the letter *b* and blending these sounds to form words [as in sounding out words]). *Strategies* are routines or plans of action that can be used to accomplish a goal or work through difficulty. Students can be taught strategies to use when they come to a word they don't know, strategies for spelling unknown words, strategies to help them write summaries of paragraphs, and other kinds of strategies. A word-reading strategy is described below. Finally, students must learn *concepts*, or ideas. They need background knowledge related to reading and to the topics they are reading about.

**Differentiating Instruction: Once Size Doesn't Fit All**

Meeting the needs of diverse readers is no small task. In a typical 3rd grade classroom, there may be virtual nonreaders, typically developing readers, and students who read at 5th or 6th grade levels or even higher. Many classrooms in which all instruction is delivered in English include students who are learning to read and speak in English at the same time. A single classroom may include children who speak several different languages at home. Teachers address these various needs by providing *differentiated instruction*, using the results of diagnostic assessments to help them identify students' strengths and needs, forming small groups of students with similar needs, and then planning instruction to target those needs. Typically, this means that teachers implement reading instruction in small groups as well as in whole class formats.

Although a quality reading curriculum will provide the foundation for effective instruction, teachers will need to adapt their instruction for students who struggle (and for high-achieving students as well). Quality classroom reading instruction can be adapted for students who find it difficult to learn to read by a) teaching the specific skills and strategies that students need to learn, based on assessment data (sometimes called 0); b) making instruction more explicit and systematic; c) increasing opportunities for practice; d) providing appropriate text at students' instructional reading levels (not too easy but not too hard); and e) monitoring students' mastery of key skills and strategies and reteaching when necessary.

**Making Instruction More Explicit**
Students with learning difficulties benefit from explicit instruction in decoding skills and strategies, fluency (modeling fluent reading, directly teaching how to interpret punctuation marks when reading orally, etc.), vocabulary word meanings and word-learning strategies, and comprehension strategies. When a teacher provides explicit instruction she or he clearly models or demonstrates skills and strategies and provides clear descriptions of new concepts (providing both clear examples and nonexamples). Students don't have to infer what they are supposed to learn. For example, a teacher who is explicitly teaching 1st grade students to sound out words demonstrates this process step by step, then provides opportunities for students to practice the skill with the teacher's feedback and support. If the student is not successful, the teacher models again. The teacher may have the students sound out a few words along with him or her. Eventually, the students apply the skill independently to sound out simple words. Students who are easily confused are more likely to be successful when teachers demonstrate and clearly explain what they need to learn. On the other hand, if confusions are not addressed and foundational skills are not mastered, it is likely that students will become more and more confused, resulting in serious reading problems.

**Providing Systematic Instruction**

Systematic instruction is carefully sequenced, so that easier skills are taught before more difficult skills. Letter–sound correspondences and phonics skills (i.e., sounding out words, applying the "silent e rule") are taught in a predetermined order according to a clear scope and sequence so that there are no gaps in students' learning. The pace of introduction of new material is reasonable to allow struggling learners to master key skills, and much of each lesson consists of practice of previously introduced skills, strategies, and concepts and the integration of these with the newly taught material. Students' learning is monitored, so that teachers can reteach key skills when needed.

**Increasing Opportunities for Practice**

Published reading programs rarely include enough practice activities for at-risk readers to master skills and strategies. Students with learning difficulties typically need extended guided, independent, and cumulative practice. During guided practice, students practice with teacher
feedback. Students need both positive and corrective feedback. Specific positive feedback calls attention to behaviors and processes the student is implementing well. Students also need to know when they have made mistakes. If clear corrective feedback is not provided, students are likely to continue to make the same errors, in effect "practicing their mistakes" (Denton & Hocker, 2006, p. 17) and forming bad habits that are difficult to break. Students also need independent practice, during which they implement skills and strategies without teacher support (but with close teacher monitoring, and with reteaching when necessary). Finally, students at risk for reading difficulties need large amounts of cumulative practice over time to learn to apply skills and strategies automatically when they read, just as skilled readers do. Cumulative practice means practicing newly learned items mixed in with items learned earlier, so that skills are not taught and "dropped." Students with reading problems often need a lot of review.

One effective way to provide extra practice opportunities in the reading classroom is the implementation of peer tutoring routines in which students are paired and taught how to work together to practice skills they have been taught (e.g., Fuchs & Fuchs, 2005; McMaster, Fuchs, & Fuchs, 2006; Saenz, Fuchs, & Fuchs, 2005). There is also preliminary evidence indicating that practice in phonics and word identification may be more effective for 1st grade at-risk readers if it includes hands-on manipulation of items such as magnetic letters or word cards (Pullen, Lane, Lloyd, Nowak, & Ryals, 2005).

Applying Skills and Strategies in Meaningful Text

Clearly, it isn't enough for students to learn to read or spell lists of words. The real purpose of reading is to get meaning from text, and the purpose of writing is to convey meaning with text. It is very important that students have the opportunity to apply word identification and spelling skills as they read and write connected text. This process must be supported by teachers who model for students how to apply what they have learned and give students feedback about their reading and writing. For example, students must be taught what to do when they get to a hard word. The most common characteristic of poor readers of all ages is the tendency to guess words that are difficult, sometimes using just a few letters. Often, students make random guesses that don't make sense—then simply continue reading, apparently unaware of this fact. This quote from a middle school student, taken from a moving article about students in middle...
school with severe reading problems, describes the situation well:

Sometimes when students in my class read, they might know how to say simple words okay, but they will skip over the big words. They look around to see if anyone is even listening to them. But they don't fix them; they just keep going. They stumble over words, trying to sound them out. Sometimes they don't even know they made a mistake, and when they finally figure out the words, they don't have a clue what it all means. They just keep going. (McCray, Vaughn, & Neal, 2001, p. 22)

As this student observed, it is nearly impossible for students to understand what they are reading—to get meaning from text—when they can't read the words on the page accurately and fluently. Students need explicit instruction, modeling, and practice in vocabulary and reading comprehension, but many students with reading problems continue to need instruction in phonics and word study even when they are in the upper elementary and secondary grades (Fletcher, 2007).

A critical part of effective reading instruction is explicitly teaching students how to use efficient word reading strategies. Simply put, students need to be taught what to do when they get to a hard word. In one research-validated early reading intervention program, young students are taught to use a three-part strategy when they try to read difficult words: "Look for parts you know, sound it out, and check it" (Denton & Hocker, 2006, p. 144). These steps are described in more detail below.

1. **Look for parts of the word you know.** In the earliest stages of learning to read, students may find a letter or a letter combination (e.g., *th*, *ing*) that they know. Later, they may recognize common word endings (e.g., *-ot* in *pot*, *rot*, *cot*). Still later, they may identify roots or base words, such as the root *spect* (which means "to see") in the words *inspect* and *spectacles*, or common prefixes and suffixes like *pre-* or *-ly*.

2. **Sound it out.** Students should be taught from the earliest lessons to use a sounding-out strategy to read unfamiliar words. They should learn how to blend sounds and larger word parts together to read words and how to apply this strategy when reading real text.
Some teachers teach students in kindergarten or 1st grade to identify unknown words by looking at pictures on the page or at one or two letters in a word. These students are being taught to use a guessing strategy, the strategy of choice of struggling readers, as described so well by the middle school student above. If a word is too difficult for a student to sound out, the teacher can model the process of looking for known letters or word parts and sounding out the word, and then simply tell the student the word. Some reading programs include controlled text, sometimes called "decodable text," that contains only words students can read using words and letter sounds they have been previously taught in the program. This kind of text can provide a temporary support for students in the early stages of reading development.

3. **Check it.** After students sound out the unfamiliar word, the last step of the three-part word reading strategy is to teach students to put the newly solved word back into the sentence and to check it to be sure it makes sense. Thus, the meaning of the word in context is not ignored; it is used as the checking mechanism. Studies of skilled young readers show that this is the main way they use context—not for guessing what words are, but for checking to be sure that their reading is making sense so they can make corrections when it doesn’t make sense.

**Monitoring Student Progress**

In schools with effective classroom reading instruction, students receive regular brief reading assessments so that their reading growth can be monitored. These assessments typically include having students read text for 1–2 minutes and calculating how many words they read correctly during that time (see Fuchs, Fuchs, Hosp, & Jenkins, 2001; Hasbrouck & Tindal, 2006). These results can be graphed, so that teachers, parents, and students can readily see progress over time. Classroom reading teachers can adjust their teaching accordingly to try to accelerate student progress.

For some students, quality classroom reading instruction is not enough. When progress-monitoring assessments indicate that students are not making enough progress with quality classroom reading instruction alone, schools can provide extra small-group reading intervention to ensure that all children learn to read in the early grades (see Denton & Mathes,
2003; Fletcher, Denton, Fuchs, & Vaughn, 2005; Vaughn, Wanzek, Woodruff, & Linan-Thompson, 2007).

References


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