Product Name: Diagnostic Reading Progress Monitoring (DPRM)

Product Description
DRPM is a computer-based reading assessment that offers 20 alternate forms each of two silent reading fluency and two vocabulary measures. The measures are to be used as part of a response to intervention (RTI) system and provide diagnostic information to supplement other measures. The DRPM reading measures are computer-based so teachers can efficiently collect data. Reports highlight essential differences in the decoding aspects of performance (the silent reading and vocabulary sentences) versus the context embedded nature of performance (silent reading maze and vocabulary maze). DRPM provides extensive information about student reading skills through individual and group charts and detailed summaries of responses.

Silent Reading Fluency Sentences (SRF-S)-Students are presented with a short sentence and click a button to begin reading the sentence. Students then answer an item about the sentence. Silent reading fluency is calculated as “words read per minute” and is reported along with item accuracy. (5 sentence items)

Silent Reading Fluency Maze (SRF-M)-Students are presented a narrative reading passage of about 100 words that contains some missing words embedded in the text. Students silently read the text to the missing words and click to select (from two response options) the word that correctly completes the sentence and the story. Silent reading fluency is calculated as "words read per minute" and is reported with item accuracy. (7 items)

Vocabulary Sentences (VS)-Students are presented as 13 stand-alone sentences. Each sentence contains one missing grade-level vocabulary word. Students read the sentences up to the missing word and click to select (from three response options) the word that best completes each sentence. Vocabulary accuracy is calculated and reported. (13 items)

Vocabulary Maze (VM)-Students are presented a narrative reading passage of about 200 words that contains some missing grade-level vocabulary words embedded in the text. Students silently read the text to the missing words and click to select (from three response options) the word that correctly completes the sentence and the story. Vocabulary accuracy is calculated and reported. (12 items)

List of Essential Features
Assignment of students into groups from which to administer tests Reports include scores for fluency, correctness, and detailed views for each student's responses as well as interactive group graphs and individual graphs, all available in PDF format.

Audience
DRPM is intended for teachers, schools, or districts as a tool to monitor students' short-term progress in silent reading and context-based vocabulary proficiency. The product is utilized in practice by grade 3-5 teachers or reading specialists as a complement to reading curriculum in determining the effectiveness of instruction based upon whether a student is making adequate reading progress over time.
Diagnostic Reading Progress Monitoring (DRPM)

Overview

• DRPM is an online diagnostic reading assessment tool for elementary readers, offering 4 different measures of reading for grades 3-5.
• Teachers monitor student progress with interactive reporting tools.
Purpose

- DRPM offers 20 alternate forms each of two silent reading fluency and two vocabulary measures to be used as part of a response to intervention (RTI) system or in conjunction with other reading assessments to monitor students' short-term progress in silent reading and context-based vocabulary proficiency.

Measures

<table>
<thead>
<tr>
<th>Reading Construct</th>
<th>Measure Type</th>
<th>Sentences</th>
<th>Maze</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silent Reading Fluency</td>
<td>SRF-S</td>
<td>SRF-M</td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>Voc-S</td>
<td>Voc-S</td>
<td></td>
</tr>
</tbody>
</table>

* Reading Comprehension also developed.
Background

- Steppingstones of Technology Innovation for Children With Disabilities
- Instrument development
  - 3 researchers
  - 2 teachers
- Three studies
  - Pilot
  - Practical Application
  - Scaling

Pilot Study

- 12/6/10 – 1/24/11
- ANOVA
  - 8 Forms
- Vocabulary example

<table>
<thead>
<tr>
<th>Sample Sizes of Students</th>
<th>Grade 3</th>
<th>Grade 4</th>
<th>Grade 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form 1</td>
<td>33</td>
<td>39</td>
<td>18</td>
</tr>
<tr>
<td>Form 2</td>
<td>37</td>
<td>40</td>
<td>13</td>
</tr>
<tr>
<td>Form 3</td>
<td>33</td>
<td>33</td>
<td>19</td>
</tr>
<tr>
<td>Form 4</td>
<td>39</td>
<td>40</td>
<td>17</td>
</tr>
<tr>
<td>Form 5</td>
<td>36</td>
<td>33</td>
<td>16</td>
</tr>
<tr>
<td>Form 6</td>
<td>44</td>
<td>24</td>
<td>19</td>
</tr>
<tr>
<td>Form 7</td>
<td>43</td>
<td>40</td>
<td>19</td>
</tr>
<tr>
<td>Form 8</td>
<td>44</td>
<td>37</td>
<td>14</td>
</tr>
<tr>
<td>Total</td>
<td>309</td>
<td>286</td>
<td>135</td>
</tr>
</tbody>
</table>

Original: Each summer the family put a jigsaw puzzle together.

More difficult alteration: Amr approached the difficult math problem as if it was a puzzle.
Practical Application Study

- Explore functioning and receive feedback
- All measures delivered once a week for 8 weeks

Scaling Study

<table>
<thead>
<tr>
<th></th>
<th>Gr 3</th>
<th>Gr 4</th>
<th>Gr 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>567</td>
<td>446</td>
<td>281</td>
</tr>
</tbody>
</table>

- 9/26/11 – 11/30/11
- ANOVA
- Convergent / Divergent validity

- Future Studies
  – IRT – equivalent forms
Public Launch

- December, 2011; www.diagnosticcbm.com was made available to the public as a free tool.
- Teachers can assign all 20 forms and can progress monitor student results with reporting tools.
- Reporting tools include group reports, individual reports, and test detail reports.
- Metrics include fluency, correctness, group comparisons, and group min, max, mean, and average data points.

Future

- Possibly addition of grades 1 and 2 reading (as mentioned by Aaron).
- Possible integration with dynamic measures of math and reading?
- Anything else?
www.diagnosticcbm.com