



# Measuring Student Performance Levels and Progress

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Field Guides to RtI Prepared by  
Wayne County RtI/LD Committee

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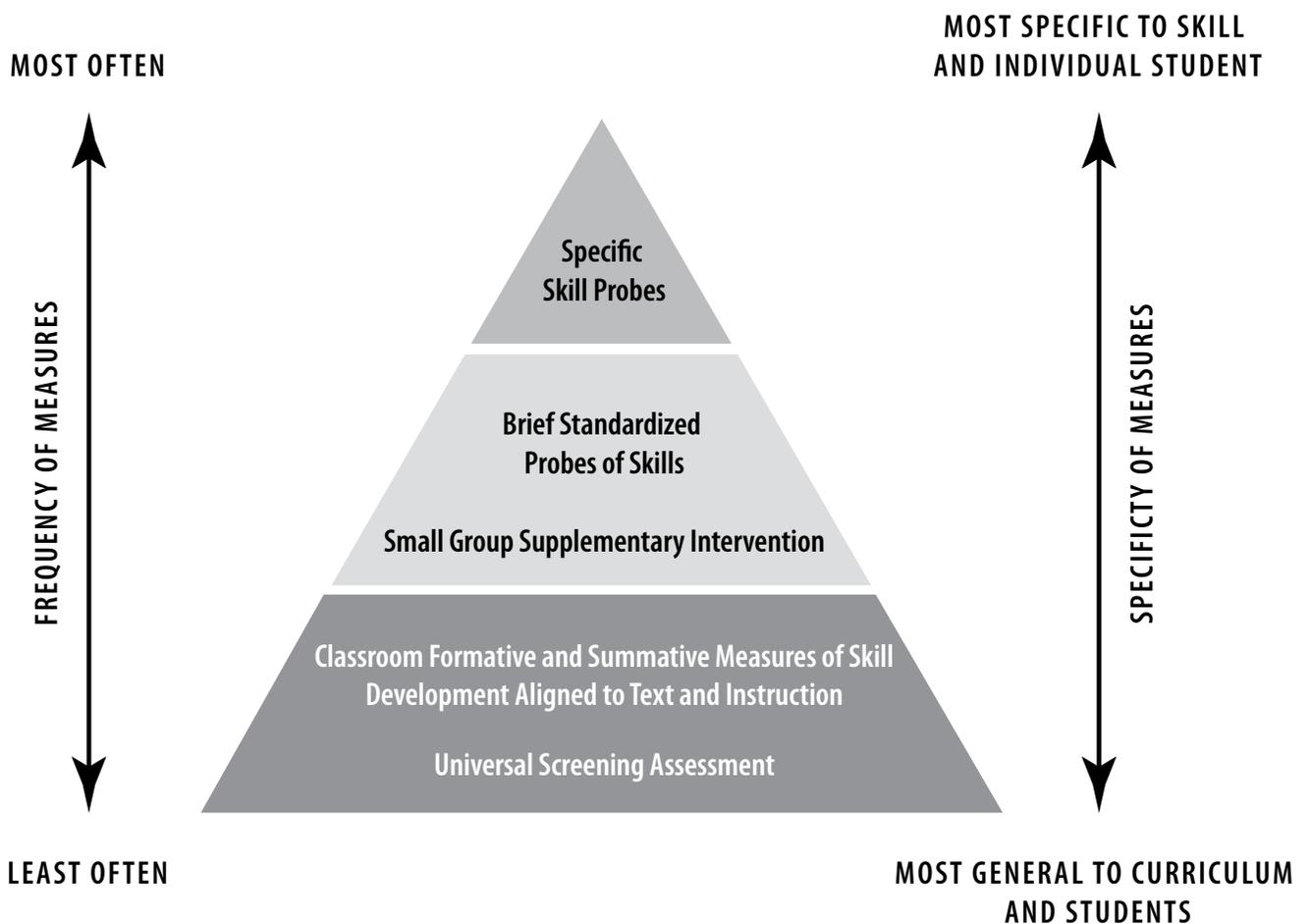
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# System-wide Collection of Achievement Data for Instructional Intervention Planning

Response to Intervention (RtI) uses a multi-tier model of educational resource delivery. Each tier involves increasing intensity of services matched to the student’s measured level of need. The outcomes of educational interventions are established with student data. Based on a problem-solving model, student data are used to determine appropriate instructional interventions and to evaluate if the interventions are actually working.

Integral to RtI is the notion of universal screening and on-going screening assessments that guide educational interventions. These universal screening assessments are not to be confused with specific eligibility evaluations. The purpose of the universal screenings is to benchmark student progress at

the classroom level. The regular education curriculum should have clearly defined instructional targets that can be measured in universal screening assessments that are administered at least once a year and may be used to mark progress three to four times a year. Ideally, schools will mark progress with three to four universal screenings within each school year. Based on the universal screening assessment findings, students can be grouped for focused instruction on the skills they need to master. Those students needing the most help would receive very intense, focused instruction that supplements the general education curriculum. Students are never pulled from their important grade level instruction. Interventions are planned as daily drill and reinforcement of component basic skills. An example of a school assessment plan is outlined below:



# Measuring Student Performance Levels and Progress

Schools commonly rely on a variety of assessment methods. These methods are briefly reviewed to assist teams to understand the different measurement methodologies they may consider.

## Common Tests and Assessments

Norm-referenced tests compare student scores to those of other students. Norm-referenced tests may be administered in group or individual settings under the same or “standardized” conditions. Examples of these types of tests are personality, achievement, intelligence tests and competency exams. The majority of students score between the 25th to 75th percentiles. Scores reported as Scaled Scores can be compared across different norm-referenced tests, controlling for differences in the reliability of the tests with regression analysis.

Criterion referenced tests compare student scores to performance criterion.

Criterion referenced tests are tests that assess performance in relation to a particular criterion or curriculum. Compare student proficiency to curriculum benchmarks and not to the performance of other students (determines master of skills). Information provided by these types of tests:

- How much of the material has been mastered
- How many students have mastered the material
- How rapidly material is being covered and mastered.

Many high stakes tests (MEAP) are criterion referenced.

## Using Michigan Curriculum Standards as Criterion for Assessment

The benchmarking of student progress with curriculum assessments three times a year is fundamental to school-wide monitoring of learning. Schools will need to start with the learning sequence. In other words, schools must first define, by grade/age level, the order of instructional content. The assessments are then purposive in measuring student growth, in identifying students in need of additional instruction, and in checking the effectiveness of instructional strategies. When working with older age students or addressing concerns not assessed by CBM methods, schools may rely on criterion-referenced assessments of the curriculum standards. The curriculum standard is the construct or domain of learning.

The Grade Level Content Expectations (GLCE) provide a set of clear and rigorous expectations for all students and provide teachers with clearly defined statements of what students should know and be able to do as they progress through school. Think of the GLCEs as measurable annual grade targets. The curriculum-based assessment should include a minimum of six items aligned to the GLCE to be minimally reliable.

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## Blueprints for Designing Curriculum-Based Assessments

If a school is developing curriculum-based assessments aligned to the GLCEs, they may want to begin with an assessment blueprint. The blueprint will focus the assessment to the construct they are attempting to measure in the assessment and serve as the template for the assessment design.

Once the blueprint is created, the team will write the test and submit the assessment to a review by peers. In review, other educators may take the test and talk through their thinking about the directions, items, tasks, and rubrics. The assessment may then be piloted with student samples at identified intervals in the school year.

Student performance will serve as the data basis for establishing proficiency targets in subsequent uses of the curriculum assessment.

## Example of Curriculum-Based Assessment Blueprint Aligned to GLCE

Criterion	Assessment	No. of Items per Test	Alternate Forms	Total Number of Items	Directions	Response	Scoring
<b>R.IT.04.02</b> Identify and describe informational text patterns including compare/contrast, cause/effect, and problem/solution	250 word passage from informational text source (e.g. social studies book)	total 24 items	3 forms for Fall, Winter, Spring, Administrations	12	oral	written	percent correct
Compare and Contrast Questions	multiple choice	6 items	3 forms	18	oral	written	percent correct
Cause and Effect Questions	multiple choice	6 items	3 forms	18	oral	written	percent correct
Problem and Solution Questions	multiple choice	6 items	3 forms	18	oral	written	percent correct

# Curriculum-Based Measurement Probes: Effective Achievement Indicators

Curriculum-Based Measurements are used to quickly probe specific skills that are presently being taught in the classroom, usually in basic skills. Four common characteristics exist across these models:

1. The measurement procedures assess students directly using the materials in which they are being instructed. This involves sampling items from the curriculum.
2. Administration of each measure is generally brief in duration (typically 1-5 minutes.)
3. The design is structured such that frequent and repeated measurement is possible and measures are sensitive to change.
4. Data are usually displayed graphically to allow monitoring of student performance.

The most commonly used and technically sound achievement indicators in curriculum based measurement include:

## Reading:

- Number of words read correctly in one minute
- Cloze Procedure
- Maze Procedure (modified Cloze)

## Spelling:

- Number of correct letter sequences in two minutes
- Number of words spelled correctly in two minutes

## Written Expression:

- Number of words written in two minutes
- Number of correctly spelled words in two minutes
- Number of correct word sequences in two minutes

## Math:

- Number of correct digits in one minute
- Number of correct answers in one minute

When working with curriculum standards and older age students, procedures for probing student learning should be mapped or aligned to the content standards. For secondary students, the indicators of student knowledge in content area instruction are:

- Student-read or administrator-read vocabulary-matching measure

These procedures can be easily applied to the context of instruction using the curriculum in which the student is being instructed. These protocols for collecting data are tools that can be mapped or aligned to the content standards.

(Source: <http://www.specialconnections.ku.edu/cgi-bin/cgiwrap/speconn/main.php?cat=assessment&section=cbm/main>; <http://www.cise.missouri.edu/links/research-cbm-links.html>)

## Progress Monitoring

Progress monitoring is a scientifically based practice that is used to assess students' academic performance and evaluate the effectiveness of instruction.

When progress monitoring is implemented correctly, the benefits are great for everyone involved. Some benefits include:

- accelerated learning because students are receiving more appropriate instruction;
- more informed instructional decisions;
- documentation of student progress for accountability purposes;
- more efficient communication with families and other professionals about students' progress;
- higher expectations for students by teachers; and
- fewer Special Education referrals.

The Center on Student Progress Monitoring offers a listing of curriculum-based measurements of demonstrated research quality. These instruments held up to standards of:

- Reliability
- Validity
- Alternate Forms
- Sensitive to Student Improvement
- AYP Benchmarks
- Improving Student Learning or Teacher Planning
- Rates of Improvement Specified

The curriculum-based measurements meeting the approval of the National Center for Progress Monitoring are listed at right.

<b>Accelerated Reader</b>
Accelerated Reader
<b>AIMSweb</b>
Early Literacy Math Maze Reading Spelling Test of Early Numeracy Written Expression
<b>EdCheckUp</b>
Maze Reading
<b>Monitoring Basic Skills Progress (MBSP)</b>
Math Reading
<b>PA Series</b>
Math Reading
<b>Test of Word Reading Efficiency (TOWRE)</b>
Phonemic Decode Efficiency Sight Word Efficiency
<b>Test of Silent Word Reading Fluency (TOSWRF)</b>
Reading
<b>Yearly Progress Pro</b>
Math Reading

## Research-Based Curriculum Measures vs. Criterion-Based Assessments

The MLPP is a criterion-based assessment. The MLPP is a widely used assessment of specific reading skills. Running records and Informal Reading Inventories (IRIs) focus on specific skills, whereas curriculum based measures are indicators of overall reading proficiency. There is little research to support the use of running records and IRIs. If teachers find them useful, running records and IRI's may be used in conjunction with weekly progress monitoring to help inform changes to students' instructional programs. (National Center on Student Progress Monitoring. [http://www.studentprogress.org/faq.asp#\\_Toc89594727](http://www.studentprogress.org/faq.asp#_Toc89594727)).

The following table summarizes the differences between criterion referenced assessments and the rigorous, research based curriculum based measurements required in the RtI methodology.

<b>Criterion-Referenced Assessments (e.g., MLPP)</b>	<b>Curriculum-Based Measurement (e.g., DIBELS)</b>
Not Consistently Administered or Scored	Standardized Administration/Scoring Procedures
Limited Research or Teacher Made Test	Research-Based
Unknown Reliability and Face Validity	Established Reliability and Validity
Measure Specific Skill/Content	Indicator of Overall Ability

### Assessment Plan Example

The following table provides a summary of a system-wide assessment plan. The following table describes the methodology, purpose, timing, and uses of achievement data necessary to provide a valid instructional program.

Assessment Method	Tested Criterion	Purpose	Frequency/Setting	Number of Items	Instructional Information	Planning Use
annual state assessment MEAP	MCF	school accountability	annual, grades 3-8 group	large scale assessment	overall achievement and levels of proficiency in content areas	school-wide areas in need of improvement/curriculum gaps
district benchmark assessment	grade level curriculum	align curriculum universal screening	3 times per year group	district standardized and/or criterion-referenced tests	benchmark progress in district and grade level content	classroom pacing and alignment general groupings of students
classroom test	teacher tests of GLCEs taught in the classroom	measure performance with classroom lessons	weekly, as appropriate to learning unit group/individual	10-25 items, essays, projects	formative and summative purposes	plan instruction and determine student mastery
curriculum assessment aligned to GLCE	GLCE or component to GLCE that is narrowly defined	grade specific school, classroom or individual	benchmark measures of complex skills group	at least 6 items specific to the construct being tested	baseline and monitoring of student response to teaching problem-solving RtI model	measure of construct of specific skill, knowledge or process narrowly defined from content standards
CBM probes used in Tier II and Tier III interventions	specific component skill probes, e.g. letter sound, fluency	school, classroom, individual	benchmark research-based probes individual	brief samples of content used in instruction are sampled with CBM methods	baseline and monitoring of skill acquisition response to intervention measurement	progress measure: intended to be repeated throughout the year to monitor learning
behavior samples	<ul style="list-style-type: none"> <li>teacher concerns with classroom performance, such as homework completion</li> <li>are not academic but are behavioral and should be measured and treated as a behavior issue, not an academic issue</li> </ul>					
other: exclusionary clause	<ul style="list-style-type: none"> <li>team identifies conditions not specific to the teaching and learning of the curriculum that need to be explored with data, observations, anecdotal records, school records medical records, language proficiency tests</li> </ul>					

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