

Supporting Students in Need of Foundational Skill Intervention

Screening Assessments: Using Data for Informed Decision Making



Timothy N. Odegard, Ph.D. · January 25, 2021

Purpose of Assessing Students

Setting the context and keeping perspective

Regardless of the assessment methods used, it is important to keep in mind your purpose for assessing a student: screening for difficulties, progress monitoring, ... or evaluating a student's competence in comparison to peers or established criteria.

– Ciullo & Reutenbuch (2020)

Ask yourself, what is it I want to know? How will this information help me to improve instruction for my students or for a specific student. Keep in mind that each interaction with your students is an opportunity for informal, authentic assessments of reading skills.

Uses of Student Data

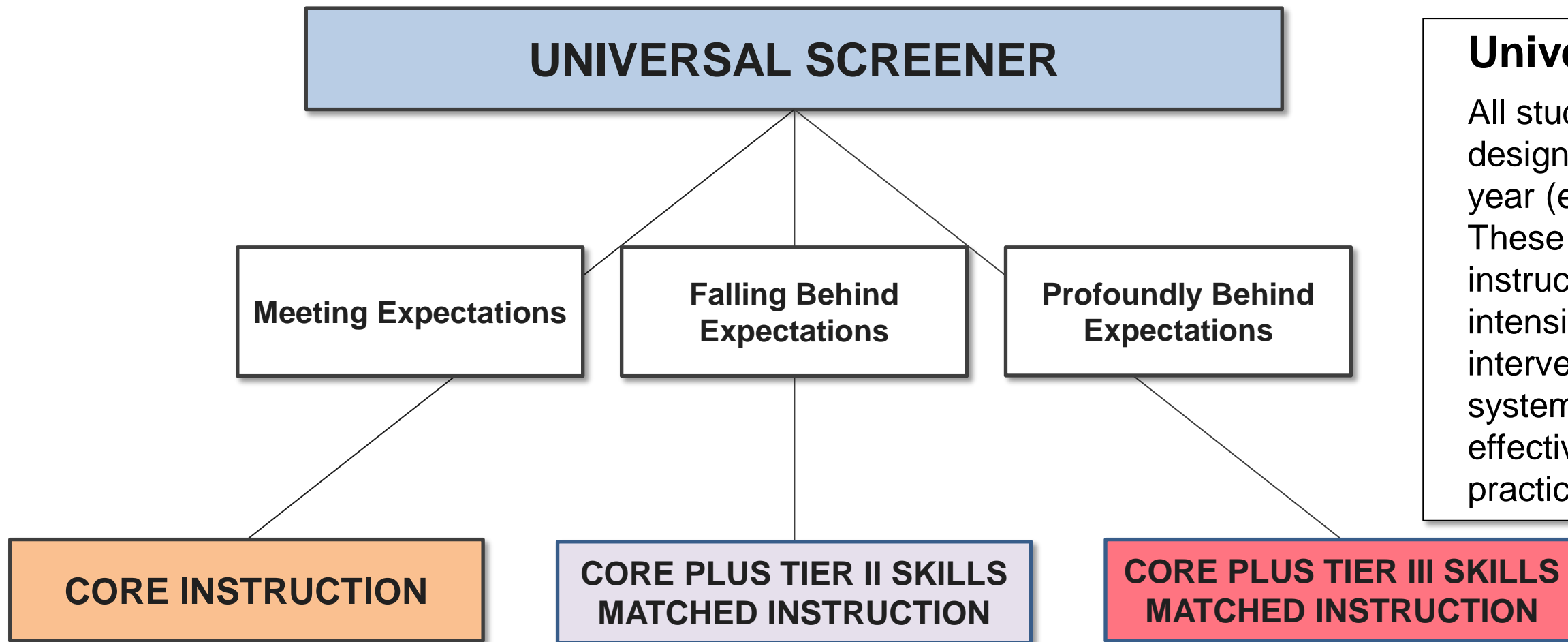
Formal student data is used differently based on the intended goal

- 1** **Universal screening** – screening assessments are formal tests given to provide a quick indicator of student skills to reveal which students are predicted to meet grade level benchmarks now and in the future.
- 2** **Diagnostic Assessment (survey level assessment)** – provide more in-depth information about what underlying skills and sources of knowledge are potentially hindering a child’s ability to meet expectation on an assessment given for universal screening. Should be based on an understanding of the skills needed to perform the skill being assessed through universal screening.
- 3** **Progress monitoring** – quick assessments collected frequently over time from students identified as needing more intensive instruction or intervention. Used to determine if modifications made to intensive instruction have resulted in the students making the increased gains needed to allow them to catch up and meet expectations.
- 4** **Outcomes evaluation** – provide outcome data for a group of students to determine if they have learned what has been taught. Outcome measures can be a summative assessment linked to a curriculum (e.g., unit exams) or more global measures linked to state standards (e.g., state reading tests).

Formal assessments refer to tests that are both valid and reliable and have been standardized – the tests are given in a standard way. Informal tests are often used during instruction to determine whether students understand what is being taught.

Screening Practices

Examples of the different forms and functions of screening

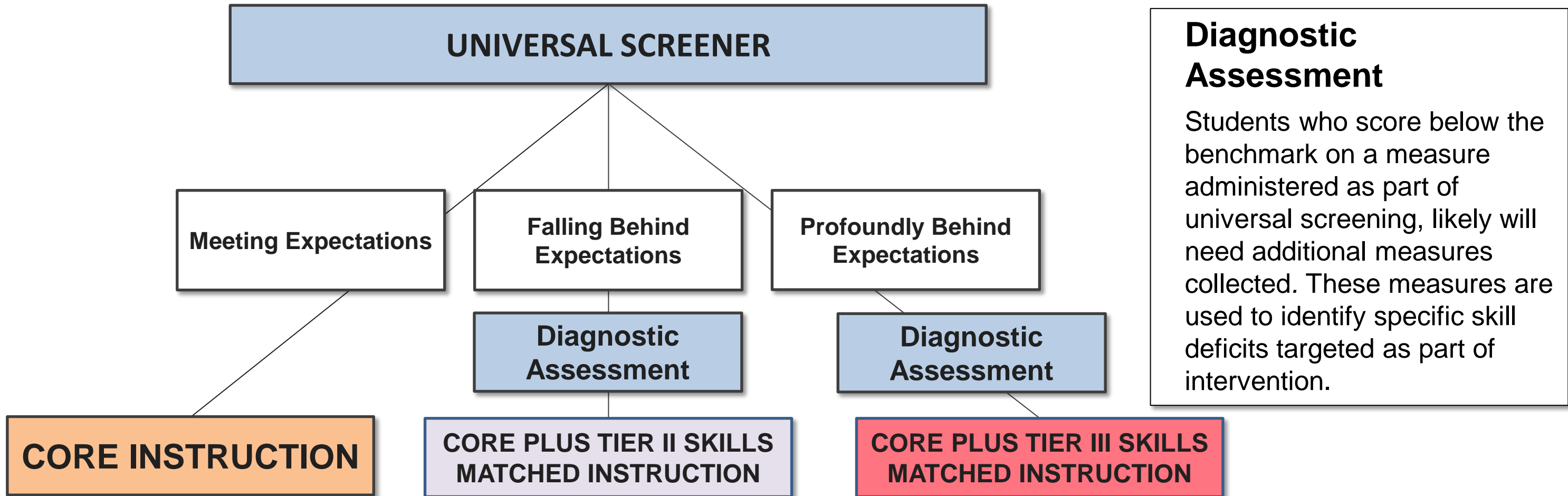


Universal Screening

All students in a grade are tested at designated points during the school year (e.g., *beginning, middle, end*). These data are used to differentiate instruction and determine the intensity of instruction and intervention. They also provide systems level data about the effectiveness of instructional practices.

Screening Practices

Examples of the different forms and functions of screening



Screening Practices

Core concepts related to screening practices

Universal Screening Process

Universal screening is a process that uses nationally normed measures of grade level skills to help determine if a student is making sufficient progress to be successful academically. All students should take part in the universal screening process.

Diagnostic Assessment

Diagnostic assessment follows universal screening. This additional testing is used to identify a student's specific skills deficits to differentiate instruction for a student and sets parameters to accurately monitor response to instruction and intervention.

Many schools implement RTI and MTSS approaches to the delivery of instruction and intervention. These approaches require the universal screening of all students.

Screening Practices

Characteristics of effective screening practices

1

A **valid** and **reliable** screener is selected, as well other measures for survey level assessment. A *valid* measure assesses what it is intended to measure. A *reliable* measure assesses a construct consistently over time.

2

A universal screener should be administered to all students in a grade level at multiple points during an academic year. Ideally 3 times (fall, winter, spring). At minimum it should be administered 2 times.

3

Effective universal screeners for reading problems directly measure a student's proficiency with reading and pre-literacy constructs. These measures should be quick and easy to administer.

4

The adoption of a universal screener as well as the additional measures used for diagnostic assessment should be systemic. These measures should be used consistently across a grade level.

5

Data obtained from both universal screening and survey level assessment should be recorded, kept, and used to document the skills and knowledge of individual students and the population of students in a grade.

Screening data guide formal data team meetings used to make instructional decisions. These data are also used to make administrative decisions about what instructional support educators need.

Systemic Reading Failure

When the issue is the instruction and systems not the students

If many students in a grade level are struggling with meeting reading expectations after receiving core or supplemental instruction, the problem is likely to be in the validity of the instruction or the fidelity of the implementation of the instruction, and not a sign of a need for very intensive interventions for many students.

– Wanzek, Al Otaiba, & McMaster (2019)

Poor core reading instruction compounds over the years creating schools populated by children who can't comprehend written language. They lack foundational reading skills, vocabulary and background knowledge.

Screening Practices

Measurement selection for universal screening

Curriculum based measures (CBM) that assess a student's proficiency with various skills are typically used as part of this process. In grades K-3, pre-reading skills (e.g., letter knowledge and phonological awareness), as well as basic reading skills (i.e., decoding, fluency, comprehension) are assessed as part of the universal screening process.

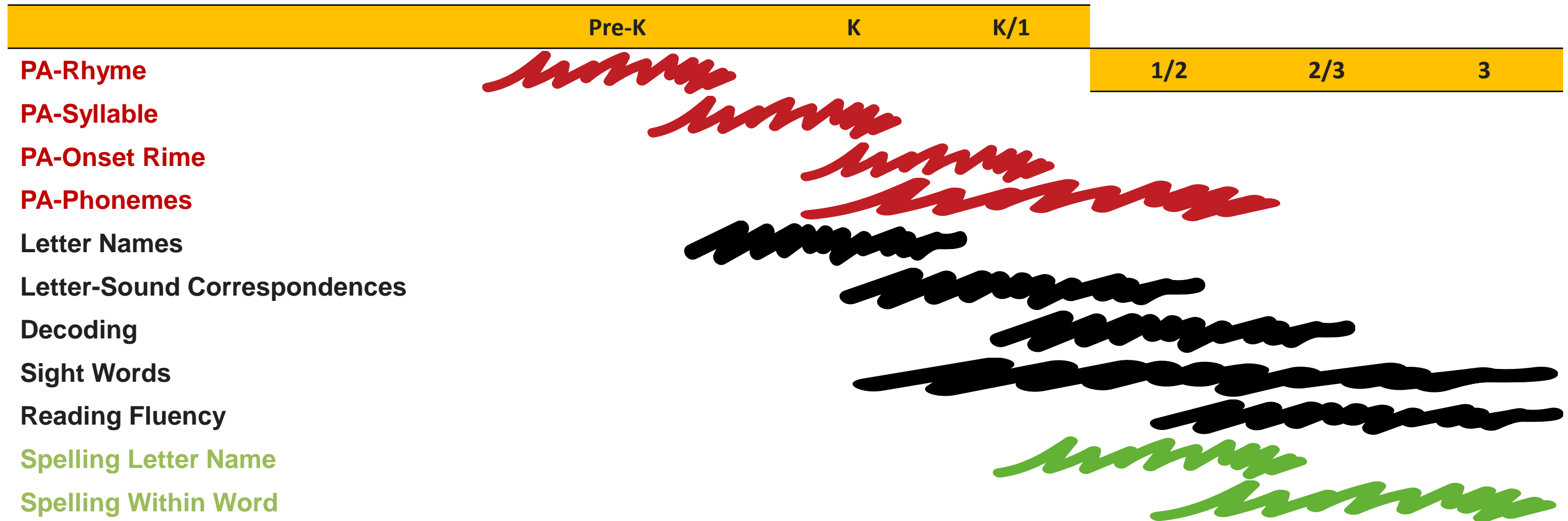
Curriculum Based Measures

Curriculum-based measures (CBM) are assessments used to determine a student's mastery of skills or content. CBM adopted for universal screening ideally should be nationally normed, valid, and reliable.

What determines when a test of a given skill is used as part of universal screening or diagnostic assessment depends on the developmental point of the student being considered.

Screening Foundational Skills

Foundational skills that support reading comprehension



Note. The graphic represents print skills and some emergent literacy skills. Comprehension and academic language skills (i.e., vocabulary, listening comprehension, etc.) develop in parallel to skills specified in the graphic.

Screening Foundational Skills

Universal screening in kindergarten

Kindergarten students are developing and refining their **phonological awareness** skills, **letter knowledge** (i.e., **letter names**), acquiring **sound-symbol correspondences**, and starting to apply their knowledge of the **alphabetic principle** and sound-symbol correspondences to **decode** words. They are also adding to the number of words they can identify by sight (i.e., **sight words**).

Student performance is compared to grade-level expectations (i.e., benchmarks).










Developmental Continuum of Print Level Reading Skills Pre K – 3	Grade	
	K	K/1
PA-Syllable		
PA-Onset Rime		
PA-Phonemes		
Letter Names		
Letter-Sound Correspondences		
Alphabetic Principle		
Decoding		
Sight Words		
Reading Fluency		
Spelling Letter Name		
Spelling Within Word		

Screening Foundational Skills

Universal screening in first grade

At the start of first grade, students are still developing **phonemic awareness**. Students are continuing to learn **letter-sound correspondences** and developing their ability to apply these skills to **decode words**, in addition to adding to the words they can read by sight (i.e., **sight words**). They are also developing their ability to **spell words**.

Student performance is compared to grade-level expectations (i.e., benchmarks).

Developmental Continuum of Print Level Reading Skills Pre K – 3	Grade	
	K/1	1/2
PA-Syllable (already developed)		
PA-Onset Rime		
PA-Phonemes		
Letter Names (already developed)		
Letter-Sound Correspondences		
Alphabetic Principle		
Decoding		
Sight Words		
Reading Fluency		
Spelling Letter Name		
Spelling Within Word		

Screening Foundational Skills

Universal screening in second grade

Students continue to learn additional **sound symbol correspondences**, in support of **decoding** and **spelling**. In addition, they add to the words they can read by sight (i.e., **sight words**), and they should be better able to apply word reading skills to read connected text efficiently with expression (i.e., **reading fluency**).

Student performance is compared to grade-level expectations (i.e., benchmarks).





Developmental Continuum of Print Level Reading Skills Pre K – 3	Grade	
	1/2	2/3
PA-Syllable (already developed)		
PA-Onset Rime (already developed)		
PA-Phonemes		
Letter Names (already developed)		
Letter-Sound Correspondences		
Alphabetic Principle (already developed)		
Decoding		
Sight Words		
Reading Fluency		
Spelling Letter Name		
Spelling Within Word		

Screening Foundational Skills

Universal screening in third grade




Third grade students continue to develop their **decoding** skills, add to the words they can read by sight (i.e., **sight words**), and further develop their ability to **spell**. They will continue to improve in their ability to apply word level reading skills and their academic language skills to read text fluently with expression (i.e., **reading fluency**).

Student performance is compared to grade-level expectations (i.e., benchmarks).

Developmental Continuum of Print Level Reading Skills Pre K – 3	Grade	
	2/3	3
PA-Syllable (already developed)		
PA-Onset Rime (already developed)		
PA-Phonemes (already developed)		
Letter Names (already developed)		
Letter-Sound Correspondences (already developed)		
Alphabetic Principle (already developed)		
Decoding		
Sight Words		
Reading Fluency		
Spelling Letter Name (already developed)		
Spelling Within Word		

Screening Practices

Three key take away points

-  Universally screen all students on grade level reading skills.
-  Use diagnostic assessments (i.e., survey level assessment) to determine if children flagged as at risk based on universal screening have developed the reading skills they should have developed during earlier grades
-  Use screening data to make changes to instructional practices at the child (*teachers*) and systems levels (*administrators*)

Supporting Students in Need of Foundational Skill Intervention

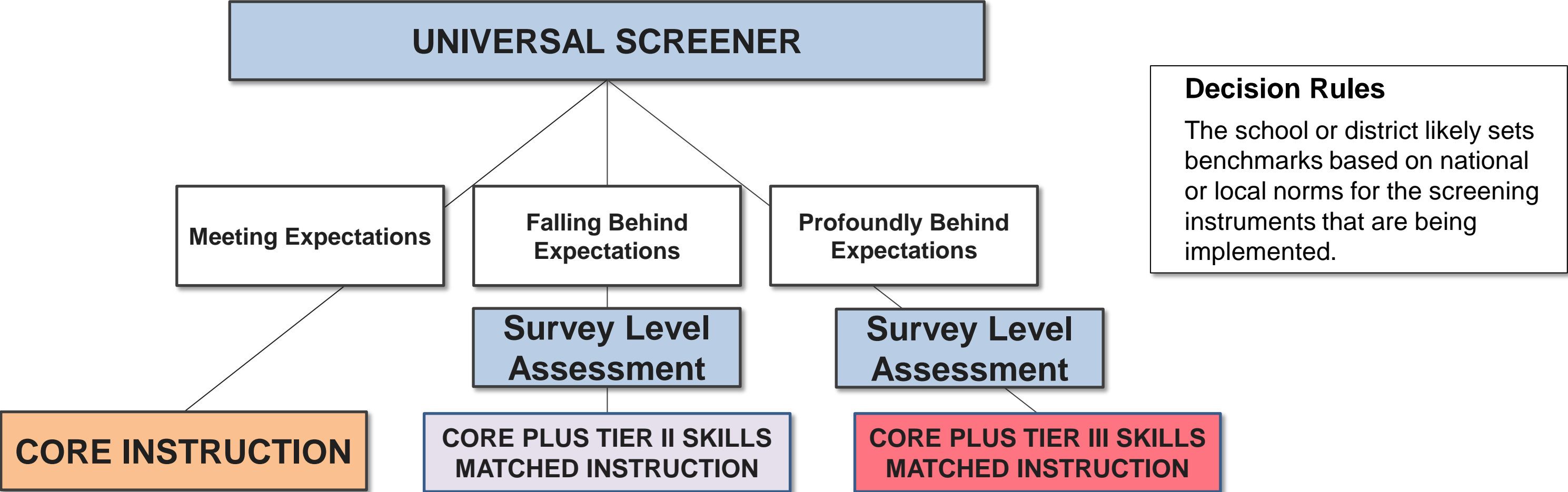
Designing Instruction and decision rules



Timothy N. Odegard, Ph.D. · March 15, 2021

Alignment of Students to Instruction

Examples of Decision Rules to Determine Placement based on screening



Systemic Reading Failure

When the issue is the instruction and systems not the students

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Effective Instruction

Characteristics of effective instruction

- 1 Explicit instruction with modeling** – requires teachers to explain concepts to students using many concrete examples, consistent direction, and clear words.
- 2 Systematic instruction with scaffolding** – refers to the organization of the instruction, the sequence in which new content is presented. Teacher provide enough support for students to acquire concepts and master skills.
- 3 Frequent opportunities for practice** – To learn something well, students need to practice what they are learning, and they also need to use what they are learning.
- 4 Immediate corrective feedback** – Provide students with immediate process focused corrective and affirmative feedback supports learning. Focus on the process of what they are doing (i.e., process feedback) and avoid making it about who they are (i.e., person feedback).
- 5 Ongoing progress monitoring** – It is crucial that teachers determine when a student is struggling to learn what is being taught and provide with instructional support as needed – using formal and informal assessment data.

Effective reading instruction is built on directly teaching the concepts and skills students need to comprehend written language. Not all students acquire these skills with the same ease necessitating the differentiation of instruction at the student level.

TIER 1 READING INSTRUCTION

READING COMPREHENSION

- Listening Comprehension
- Comprehension Strategies
- Text Structure
- Morphology
- Vocabulary
- Background Knowledge

FLUENCY

- Word and Connected Text Reading (Instructional Level)
- Application of Word Recognition Skills
- Practice to Support Automatic and Prosodic Reading

WORD STUDY

- Phonological Awareness
- Letter Knowledge
- Letter-Sound correspondence
- Syllables
- Syllabication
- Decoding
- Encoding
- Sight Words

WRITING

- Letter Formation
- Handwriting Instruction
- Sentence Structure
- Paragraph Structure
- Text Structure
- Syntax

Direct Instruction

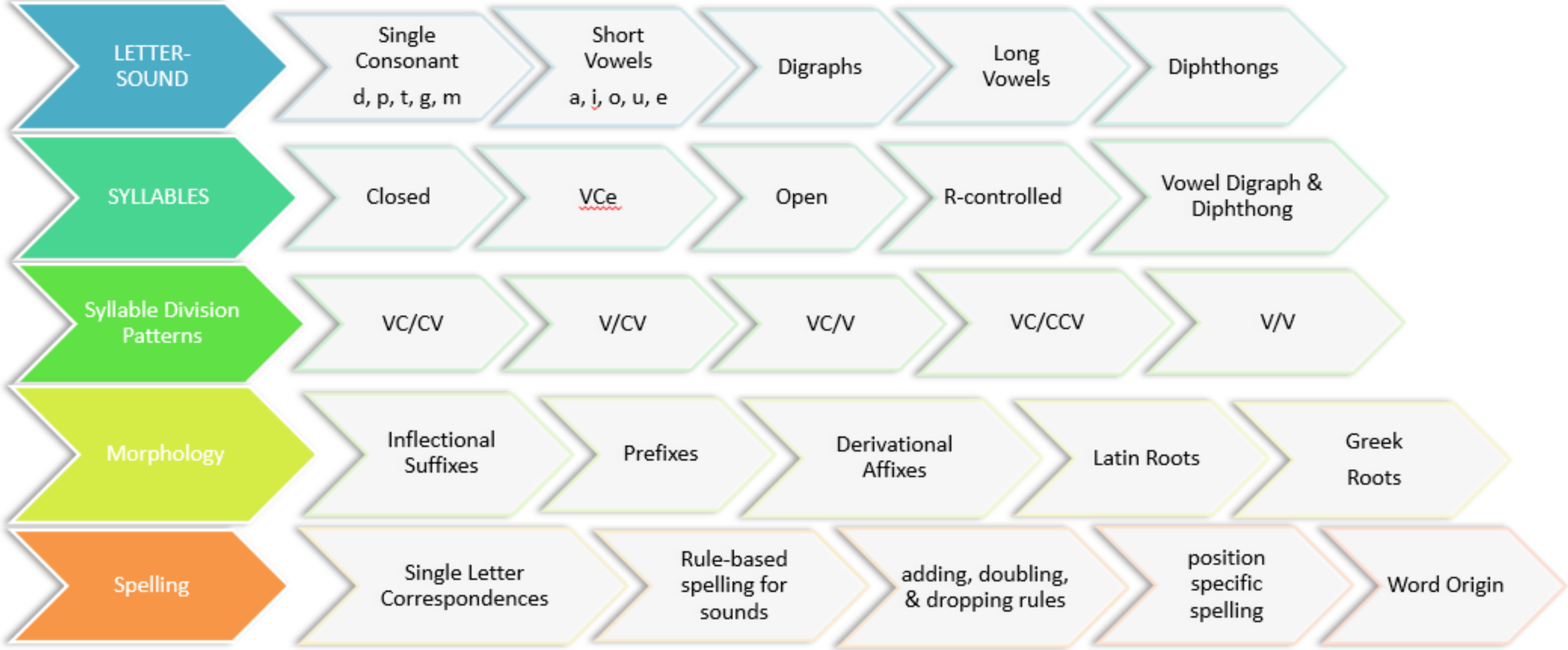
Modeling

Practice

Immediate
Corrective
Feedback

Sequence of Instruction

Sequence of instruction is planned and thoughtful. Prerequisite skills are taught before advanced skills



Note. The above graphic is a snapshot of a cross-section of instructional targets aligned with structured literacy for illustrative purposes. It is not a complete representation of all components (e.g., phonological awareness, letter formation, vocabulary, comprehension, grammar, written expression are not specified).

Direct Instruction

Direct Instruction and plentiful practice

Teacher-I do

Direct instruction provides explicit instruction, sets goals for learning, models process and think aloud

Teachers & Students-We do

Guided practice & Collaborative learning interactive instruction provides opportunity for questions, clarification and additional modeling; peer scaffolding and learning of process and content; provides opportunity for immediate corrective feedback

Students-You do

Independent practice responsibility for process and outcome shifts to the students and the teacher provides feedback and evaluates their work

- *Scaffold Instruction*
- *Guided Instruction*
- *Gradual Release Model*
- *Collaborative Learning*

A key to implementing quality instruction is providing appropriately scaffolded opportunities to practice learning. Children must be supported in their efforts to apply what is taught to successfully read, spell and write.

Direct Instruction

Immediate Corrective Feedback

CORRECT, QUICK
RESPONSE

Acknowledge
and move on



INCORRECT "FACT"
RESPONSE

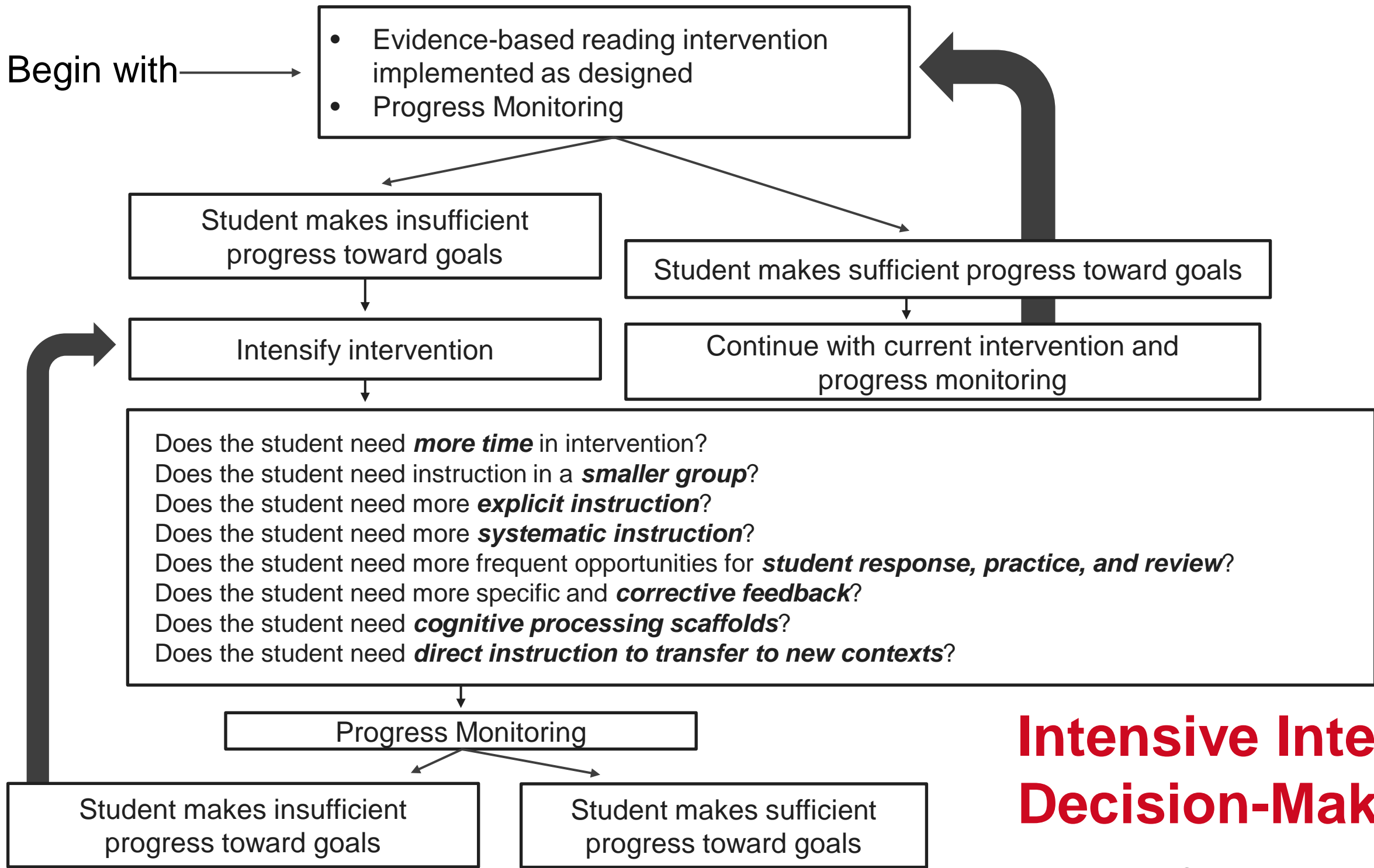
Model the
correct answer

INCORRECT "RULE"
RESPONSE

Guide to correct
answer

Student repeats
correct response to
consolidate correct
information.

Archer & Hughes *Explicit Instruction: Effective and Efficient Teaching* (2010)



Intensive Intervention Decision-Making Process

Wanzek, Al Otaiba, McMaster (2019)

Increasing Instructional Intensity

Examples of Common Practices

If a student fails to make progress the ***intensity of the intervention*** should be increased until an effective level of intervention is reached.

Intervention may be intensified by:

- 1) Increasing frequency of intervention sessions (e.g., a student who receives intervention in both reading and math with 2 days of reading and 3 days of math increases frequency in reading by changing to 3 days of reading and 2 days of math).
- 2) Changing the time-of-day intervention is delivered (e.g., RTI period moved from afternoon to morning).
- 3) Changing the intervention provider (i.e., intervention providers should be highly trained, and the intervention should be implemented with fidelity).
- 4) Changing interventions
- 5) Changing duration of intervention sessions (e.g., moving from 30 minutes to 60 minutes).

*Often the focus is on **organizational factors** that can be changed to increase the intensity of an intervention. Don't forget to also consider instructional factors that can be used to improve student learning outcomes.*

Increasing Instructional Intensity




Examples of Research Informed Instructional Intensifiers

Adapted from Wanzek, Al Otaiba, & McMaster, (2019)

- Explicit Instruction** When teachers directly present and model new practices step-by-step for students, they are using explicit instruction. Explicit instruction is used during the initial instruction of practices or strategies.
- Systemic Instruction** Educators can increase the intensity of the intervention for students by breaking a task or practice into smaller steps, further sequencing the instruction from easier to more difficult.
- Opportunities for Student Response** Provide additional opportunities for students to get deliberate practice with the tasks or practices they are trying to master. This provides teachers with additional chances to monitor student learning.
- Specific and Corrective Feedback** Increase the specificity and amount of feedback. Valuable feedback specifies what a student has done correctly and what the student must do differently to complete the task successfully (i.e., process feedback).
- Cognitive Processing Scaffolds** Although teaching cognitive processes in isolation has not been demonstrated to benefit reading, cognitive scaffolds can be introduced to support students who may have issues with attention, etc.
- Teaching for Transfer** Provide explicit and systematic instruction in new tasks and practices, with plenty of response and feedback opportunities in varied contexts. Remind students to apply concepts across contexts.

Designing Instruction

Three key take away points

-  Good intervention builds on solid differentiated core reading instruction.
-  Strive to intensive intervention using instructional intensifiers not just organizational intensifiers.
-  Develop a plan using a team approach across a building and district. Document it. Communicate it. Implement and support it.

Supporting Students in Need of Foundational Skill Intervention

Progress Monitoring



Timothy N. Odegard, Ph.D. · May 10, 2021

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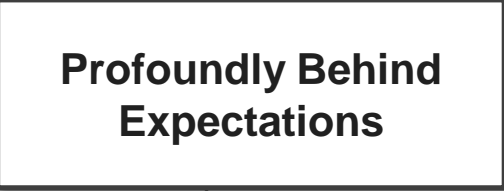
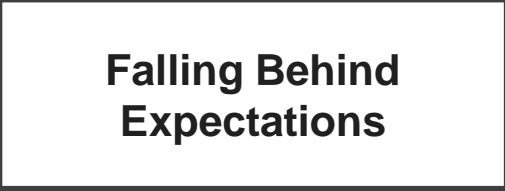
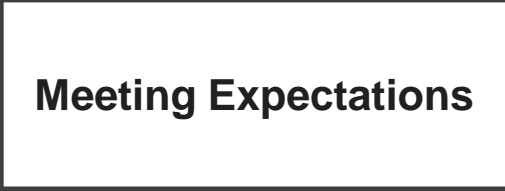
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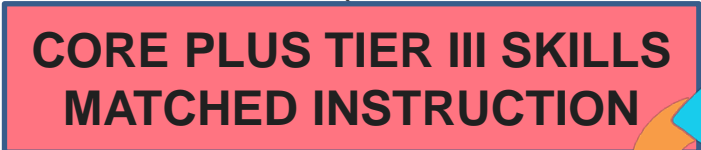
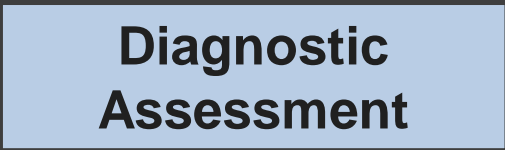
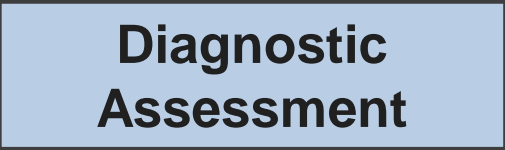
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Alignment of Students to Instruction

Ongoing Progress Monitoring of Student Performance



Progress Monitoring
Progress monitoring is the regular, periodic assessment of a student's response to instruction and intervention.



Progress Monitoring

Progress Monitoring



Begin with →

- Evidence-based reading intervention implemented as designed
- **Progress Monitoring**

Student makes insufficient progress toward goals

Student makes sufficient progress toward goals

Intensify intervention

Continue with current intervention and **progress monitoring**

Does the student need **more time** in intervention?
Does the student need instruction in a **smaller group**?
Does the student need more **explicit instruction**?
Does the student need more **systematic instruction**?
Does the student need more frequent opportunities for **student response, practice, and review**?
Does the student need more specific and **corrective feedback**?
Does the student need **cognitive processing scaffolds**?
Does the student need **direct instruction to transfer to new contexts**?

Progress Monitoring

Student makes insufficient progress toward goals

Student makes sufficient progress toward goals

Intensive Intervention Decision-Making Process

Wanzek, Al Otaiba, & McMaster (2019)

Progress Monitoring

Differences between progress monitoring and benchmark screening

Adapted from Hasbrouck & Hougen (2020)

	Benchmark / Screening	Progress monitoring
Goals	Scores are compared to established norms or benchmarks	Scores are compared to individually set performance goals
Frequency of Testing	Administered three or four times a year	Administered as often as 2 times per week, 1 time per week, bimonthly, or monthly depending on the services a student is receiving
Recording Scores	Scores recorded as numbers relative to norms or benchmark expectations	Scores recorded on individual student graphs for visual analysis of data trends to gauge if progress is sufficient to meet the student's individually set target
Level of Difficulty	Assessments are always at the student's current grade levels (e.g., all 2 nd graders take 2 nd grade tests)	Assessments are either at the student's current instructional level or one level above – the goal level (e.g., a 4 th grader reading at the 2 nd grade level uses either 2 nd grade or 3 rd grade tests)

When using curriculum-based measures (CBM) assessments for monitoring students' progress, most of the standardized procedures that are used with benchmark/screening assessment are used, but with four differences.

Progress Monitoring

Overview of the process of progress monitoring

Progress Monitoring

Multiple data points are gathered to gauge if a child is responding to instruction / intervention

Progress Monitoring

Additional data points are gathered to gauge if the changes to instruction / intervention impacted the student's rate of improvement



Decision Point 1

If a student is flagged as at risk on the Universal Screener, then conduct diagnostic assessments as needed to determine the instructional target for intervention

Decision Point 2

If the child is not making sufficient gains to reach the instructional target, then the teacher should consider intensifying the intervention

Decision Point 3

Check the rate of improvement and determine if there is a need for an instructional change to intensify the intervention

Adapted from Odegard, Cooper, Hirschmann, & Alexander (2017)

Progress Monitoring

Considerations when selecting a progress monitoring instrument

Sensitive to Change

Progress monitoring assessments must be able to capture the growth the student experiences in the area of instruction in order to accurately reflect a program's efficacy. Monitor a skill that makes sense based on how reading develops (e.g., if a child is receiving word reading intervention – a reading comprehension test is not an appropriate progress monitoring instrument).

Parallel Measures

Parallel (i.e., equivalent) forms are equivalently able to measure the monitored skill, and the results are comparable across multiple times.

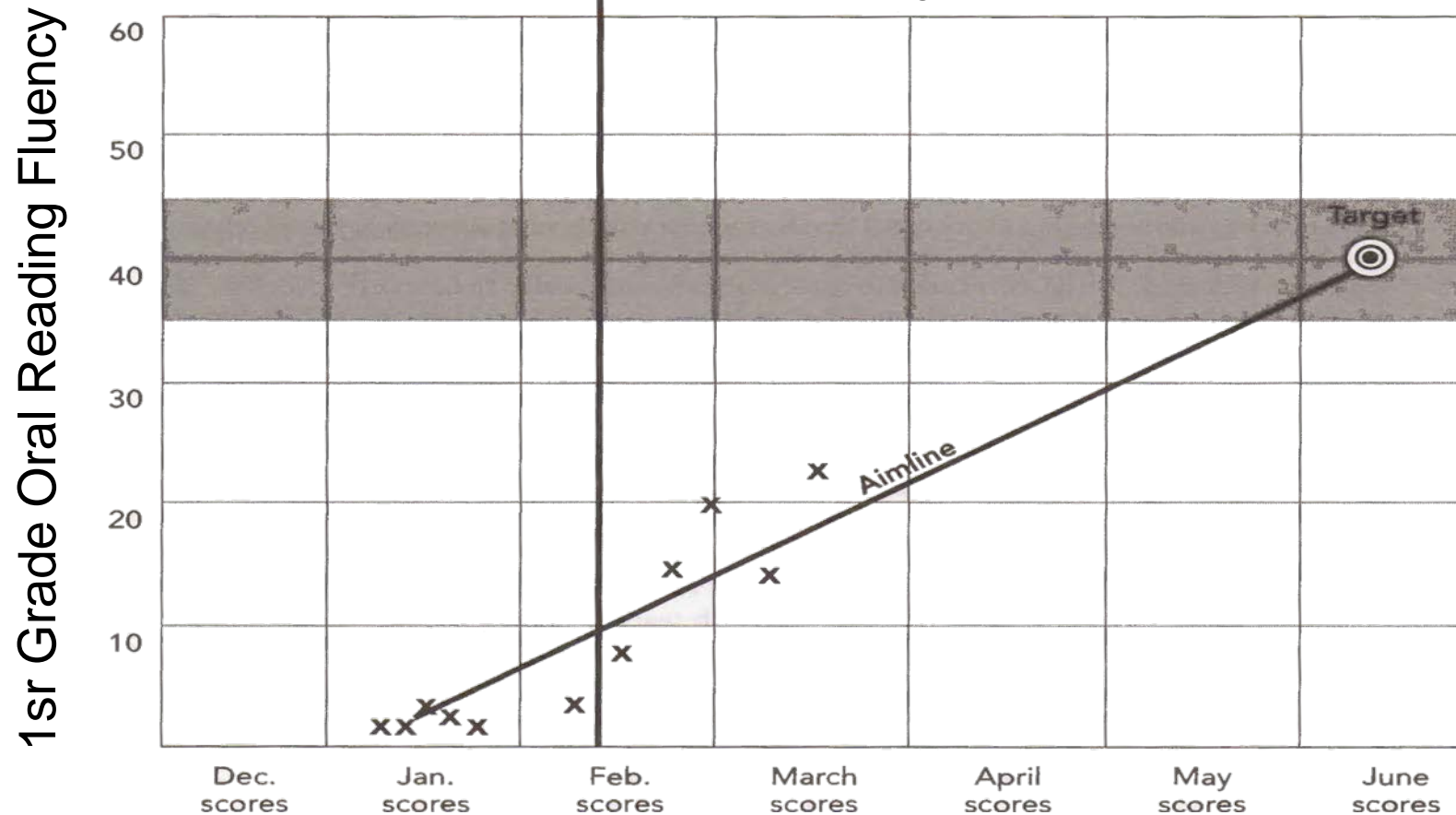
Any progress monitoring test selected must be sensitive to the changes that should be caused by the intervention provided and have multiple parallel versions of the test.

Progress Monitoring

Example of Plotting Student's Progress Towards a Goal

Progress Monitoring: The Teacher's Map

A change in intervention was implemented and progress was documented



Example of a progress monitoring chart you will likely see in your student's school records. The data points (Xs) are words correct per minute. The solid line (Aimline) shows the expected trajectory your student will need to follow in order to reach Benchmark (or low-risk_ levels by the end of the year.

Adapted from Hasbrouck & Hougen (2020)

Progress Monitoring

Example of Plotting Student's Progress Towards a Goal

PM Time	Week	Score	Errors	ROI
Baseline	0	10		-
1	2	12		1.0
2	4	13		0.5
3	6	14		0.5
4	8	16		0.65
Cumulative ROI	0.7			

Rate of Improvement

The rate of improvement, or slope, for each student may easily be calculated. To calculate ROI, the score from the prior probe is subtracted by the score from the current probe, and the difference is divided by the number of weeks that has elapsed between the two probes.

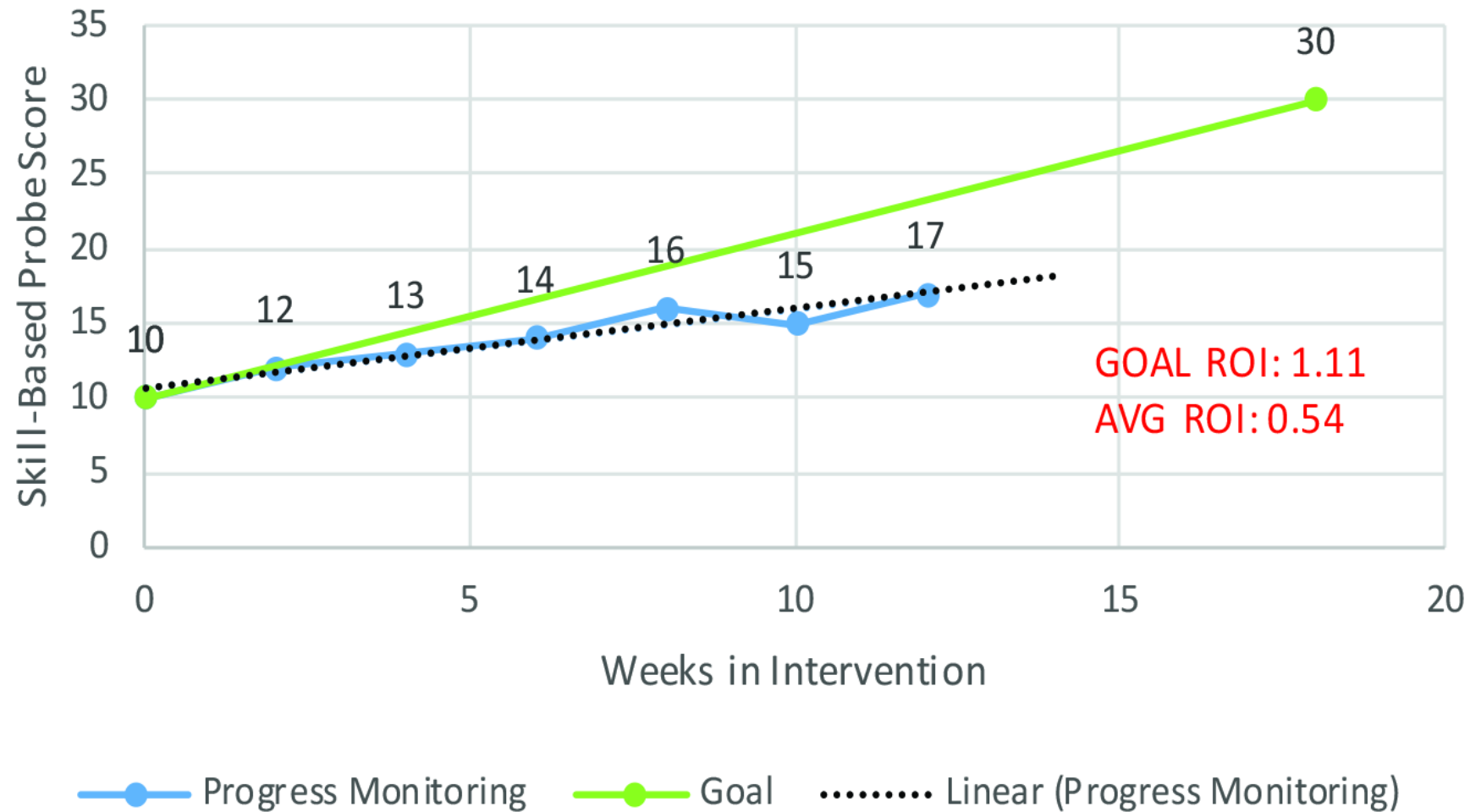
Calculating Rate of Improvement

$$\frac{\text{Score 2} - \text{Score 1}}{\text{Time 2} - \text{Time 1}}$$

Adapted from Odegard, Cooper, Hirschmann, & Alexander (2017)

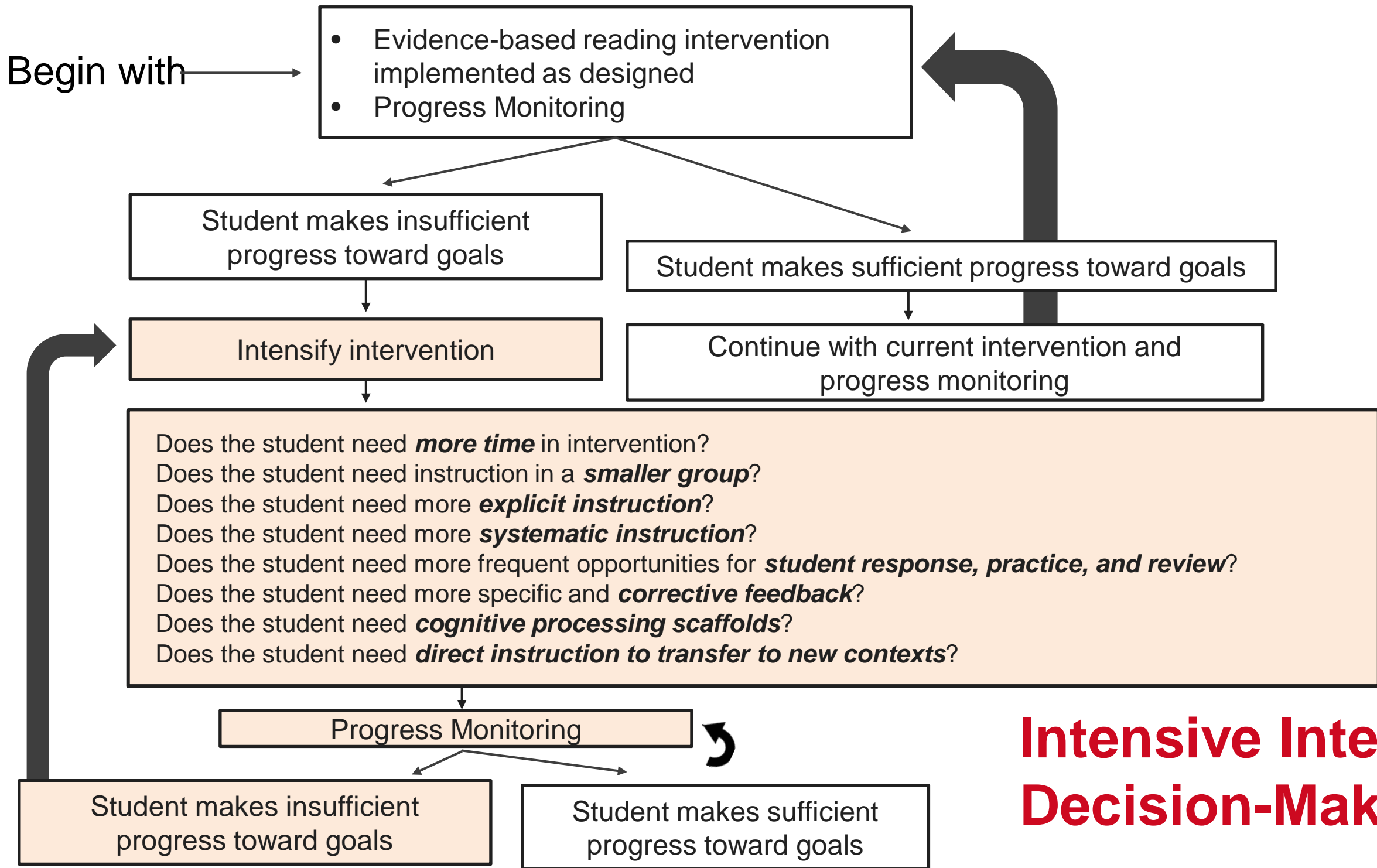
Progress Monitoring

Example of Plotting Student's Progress Towards a Goal



Graphing a student's progress provides a quick visual representation of student growth. The student's progress toward the goal is evaluated, and decisions regarding intervention intensity are made. Comparison of student's average rate of improvement (ROI) to the Goal ROI will also inform the decision of potential intervention changes.

Adapted from Odegard, Cooper, Hirschmann, & Alexander (2017)






Intensive Intervention Decision-Making Process

Wanzek, Al Otaiba, McMaster (2019)

Progress Monitoring

Three key take away points

-  A progress monitoring test must be sensitive to the changes that should result from the intervention provided.
-  Select progress monitoring tests that are on a student's ***instructional level*** and just above.
-  The goal is to determine if the ***rate of improvement*** in a child's reading skill is sufficient to allow them to reach the ***target***.