DIBELS® Math

Driven by Data: The use of DIBELS Math within an Outcomes Driven Model

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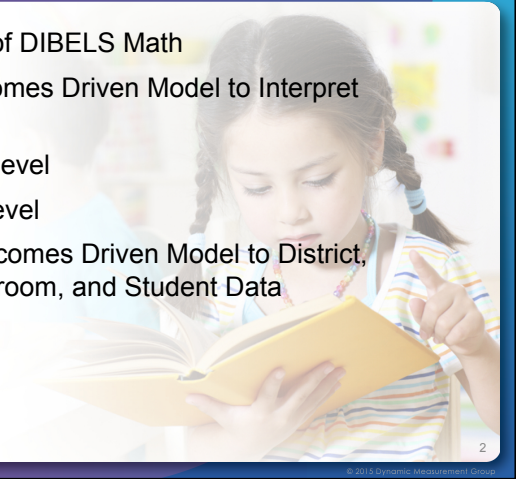
Presentation Objectives

Brief Review of DIBELS Math

Use the Outcomes Driven Model to Interpret Data

- Systems Level
- Student Level

Apply the Outcomes Driven Model to District, School, Classroom, and Student Data



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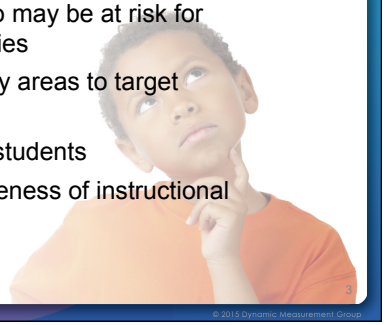
What Is DIBELS® Math?

- A set of measures used to assess mathematics skills for students from kindergarten through sixth grade that can be used to:
  - Identify students who may be at risk for mathematics difficulties
  - Help teachers identify areas to target instructional support
  - Monitor progress of students
  - Examine the effectiveness of instructional support



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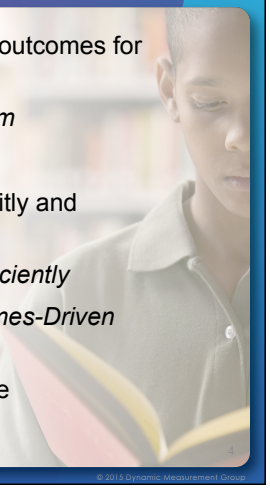
Foundations of DIBELS® Math

- *Prevention* focus–We CAN change outcomes for students
- DIBELS Math is one part of a *system*
- DIBELS Math is an *indicator*
- Teach mathematics concepts explicitly and thoroughly
- Monitor progress *frequently and efficiently*
- Use DIBELS Math within an *Outcomes-Driven Model of decision making*
- *Outcomes* drive instructional change



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DIBELS® Math Measures

Early Numeracy
- Beginning Quantity Discrimination
- Number Identification Fluency
- Next Number Fluency
- Advanced Quantity Discrimination
- Missing Number Fluency

Computation

Concepts and Applications

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Measures by Grade

	Beginning Quantity Discrimination	Number Identification	Next Number Fluency	Advanced Quantity Discrimination	Missing Number Fluency	Computation	Concepts and Applications
K							
1st							
2nd							
3rd							
4th							
5th							
6th							

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Time to Test

Grade	# of Measures	Time to Test	Total
Kindergarten	BOY, MOY, EOY: BQD, NIF, NNF	3 one-minute tests given individually	3 minutes
First Grade	BOY: NIF, NNF, AQD, MNF, Computation	4 one-minute tests given individually 2 two-minute tests done whole class	8 minutes
	MOY, EOY: AQD, MNF, Computation	2 one-minute tests given individually 2 two-minute tests done whole class	6 minutes
Second Grade	BOY, MOY, EOY: Computation, Concepts and Applications	2 two-minute tests & 1 five-minute tests done whole class	9 minutes
Third – Sixth Grade	BOY, MOY, EOY: Computation, Concepts and Applications	2 three- to six-minute tests & 1 ten- to sixteen-minute test	18-28 minutes

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Features of DIBELS® Math

- Linked to CCSS
- Standardized
- Timed
- Brief
- Problem types carefully constrained within and across probes
- Purposes–universal screening and progress monitoring
- Benchmark goals

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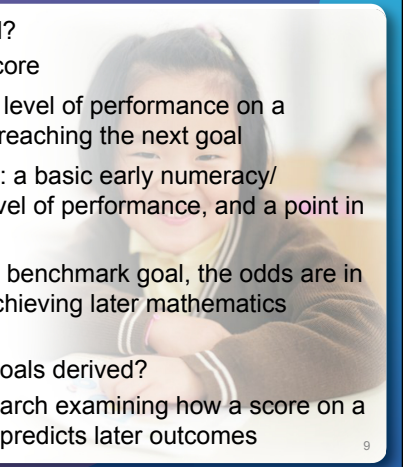
DIBELS® Math Benchmark Goals



What is a Benchmark Goal?

A research-based target score

- Represents the lowest level of performance on a measure that predicts reaching the next goal
- Consists of three parts: a basic early numeracy/ mathematics skill, a level of performance, and a point in time
- If a student achieves a benchmark goal, the odds are in favor of that student achieving later mathematics outcomes

How are the Benchmark Goals derived?

Based on longitudinal research examining how a score on a measure at a point in time predicts later outcomes

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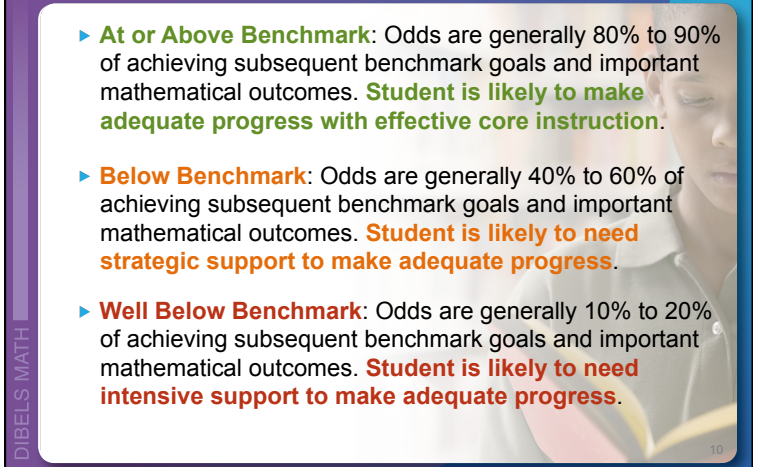
Three Levels of Performance Compared to Benchmark Goals



- **At or Above Benchmark**: Odds are generally 80% to 90% of achieving subsequent benchmark goals and important mathematical outcomes. **Student is likely to make adequate progress with effective core instruction**.
- **Below Benchmark**: Odds are generally 40% to 60% of achieving subsequent benchmark goals and important mathematical outcomes. **Student is likely to need strategic support to make adequate progress**.
- **Well Below Benchmark**: Odds are generally 10% to 20% of achieving subsequent benchmark goals and important mathematical outcomes. **Student is likely to need intensive support to make adequate progress**.

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Benchmark Goals

DIBELS Math Preliminary Benchmark Goals and Cut Points for Risk for Kindergarten Children

DIBELS Math Measure	DIBELS Math Score Level	Likely Need for Support	Beginning of Year	Middle of Year	End of Year
DIBELS Math Composite Score	At or Above Benchmark	Likely to Need Core Support	26+	72+	88+
	Below Benchmark	Likely to Need Strategic Support	15 - 25	51 - 71	67 - 87
	Well Below Benchmark	Likely to Need Intensive Support	0 - 14	0 - 50	0 - 66
Beginning Quantity Discrimination (BQD)	At or Above Benchmark	Likely to Need Core Support	5+	8+	12+
	Below Benchmark	Likely to Need Strategic Support	2 - 4	5 - 7	9 - 11
	Well Below Benchmark	Likely to Need Intensive Support	0 - 1	0 - 4	0 - 8
Number Identification Fluency (NIF)	At or Above Benchmark	Likely to Need Core Support	6+	15+	25+
	Below Benchmark	Likely to Need Strategic Support	4 - 5	8 - 14	14 - 24
	Well Below Benchmark	Likely to Need Intensive Support	0 - 3	0 - 7	0 - 13
Next Number Fluency (NNF)	At or Above Benchmark	Likely to Need Core Support	5+	11+	13+
	Below Benchmark	Likely to Need Strategic Support	2 - 4	8 - 10	10 - 12
	Well Below Benchmark	Likely to Need Intensive Support	0 - 1	0 - 7	0 - 9

The benchmark goal is the number provided in the At or Above Benchmark row. The cut point for risk is the first number provided in the Below Benchmark row. At the beginning, the DIBELS Math Composite is 2 * BQD + 1 * NIF + 2 * NNF. At the middle, the DIBELS Math Composite is 3 * BQD + 1 * NIF + 3 * NNF. At the end of year, the DIBELS Math Composite is 2 * BQD + 1 * NIF + 3 * NNF.

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Composite Scores

- Composite scores provide the best overall estimate of the student's skills.
- Composite scores take all of the measures into consideration
- Different weights are given to different measures depending on the time of year so they contribute approximately the same to the Composite Score
- Composite scores may increase or decrease because of the number of measures that make up them (e.g. 1st grade from fall to winter)

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Use of DIBELS® Math Measures within an Outcomes Driven Model

- Teachers have to use the data for instructional decision-making
- Can occur for both screening and progress monitoring
- A framework for using DIBELS Math data
  - System-level data–so all students reach outcomes
  - Student-level data–so each student reaches outcomes
- A series of steps, questions, and data sources to help answer the questions

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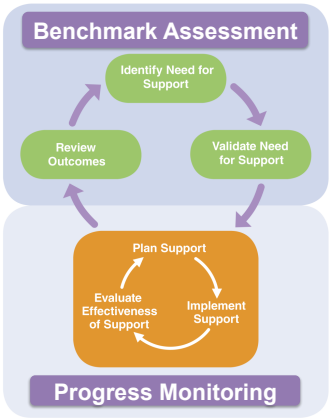
Outcomes-Driven Model

Outcomes-Driven Model steps:

1. Identify need for support.
2. Validate need for support.
3. Plan and implement support.
4. Evaluate and modify support.
5. Review outcomes.



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ODM Step 1: Identify Need for Support

ODM Step	Questions: Systems	Questions: Student
1. Identify Need for Support	Are there students who may need support? How many students may need support?	Which students may need support?
2. Validate Need for Support	Are we reasonably confident in the accuracy of our data overall?	Are we reasonably confident that the identified students need support?
3. Plan and Implement Support	At what grade levels and/or in what areas may support be needed? What are our system-wide goals? What is our system-wide plan for support?	What are the student's skills and needs? What is the plan of support for the student, including goals and plan for progress monitoring?
4. Evaluate and Modify Support	Are we making progress toward our system-wide goals? Is our system of support effective?	Is each student making adequate progress? Is the support effective for individual students?
5. Review Outcomes	Have we met our system-wide goal? Is our system of support effective? *Are there students who may need support? How many students may need support?*	Has the support been effective for individual students? Has the student met his/her goal? *Which students may need support?*

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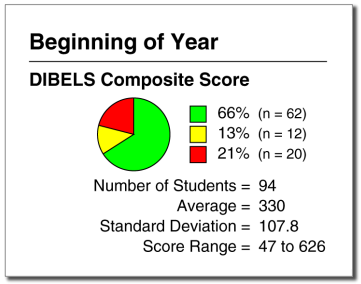
Are There Students Who Need Instructional Support?

School or District Overview Report

Summarizes percent of students whose scores fall at/above, below, or well below the benchmark goal

Includes all of the measures used in that grade at that time of the year



Status	Score Level	Likely Need For Support
	At or Above Benchmark	Likely to Need Core Support
	Below Benchmark	Likely to Need Strategic Support
	Well Below Benchmark	Likely to Need Intensive Support

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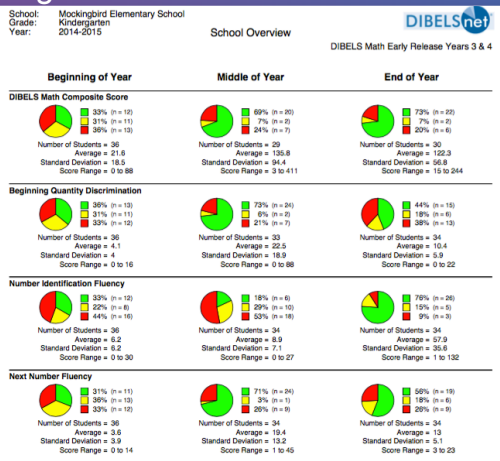
Sample School Overview Report - Kindergarten


School: Mockingbird Elementary School
Grade: Kindergarten
Year: 2014-2015

School Overview

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DIBELS Math Early Release Years 3 & 4

	Beginning of Year	Middle of Year	End of Year
DIBELS Math Composite Score	33% (n = 12) 31% (n = 11) 36% (n = 13) Number of Students = 36 Average = 21.8 Standard Deviation = 18.5 Score Range = 0 to 88	69% (n = 20) 7% (n = 2) 24% (n = 7) Number of Students = 29 Average = 135.8 Standard Deviation = 94.4 Score Range = 3 to 411	73% (n = 22) 7% (n = 2) 20% (n = 6) Number of Students = 30 Average = 122.3 Standard Deviation = 56.8 Score Range = 15 to 244
Beginning Quantity Discrimination	36% (n = 13) 31% (n = 11) 33% (n = 12) Number of Students = 36 Average = 4.1 Standard Deviation = 4 Score Range = 0 to 16	73% (n = 24) 6% (n = 2) 21% (n = 7) Number of Students = 33 Average = 22.5 Standard Deviation = 18.9 Score Range = 0 to 88	44% (n = 15) 18% (n = 6) 38% (n = 13) Number of Students = 34 Average = 10.4 Standard Deviation = 5.9 Score Range = 0 to 22
Number Identification Fluency	33% (n = 12) 22% (n = 8) 44% (n = 16) Number of Students = 36 Average = 6.2 Standard Deviation = 6.2 Score Range = 0 to 30	18% (n = 6) 29% (n = 10) 53% (n = 18) Number of Students = 34 Average = 8.9 Standard Deviation = 7.1 Score Range = 0 to 27	76% (n = 26) 15% (n = 5) 9% (n = 3) Number of Students = 34 Average = 57.9 Standard Deviation = 35.6 Score Range = 1 to 132
Next Number Fluency	31% (n = 11) 36% (n = 13) 33% (n = 12) Number of Students = 36 Average = 3.6 Standard Deviation = 3.9 Score Range = 0 to 14	71% (n = 24) 3% (n = 1) 26% (n = 9) Number of Students = 34 Average = 19.4 Standard Deviation = 13.2 Score Range = 1 to 45	56% (n = 19) 18% (n = 6) 26% (n = 9) Number of Students = 34 Average = 13 Standard Deviation = 5.1 Score Range = 3 to 23

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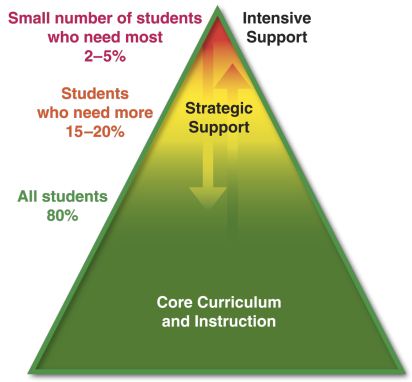
Curriculum and Instruction: Multiple Levels of Support

Continuum of generally effective services of varying intensity to provide support for 100% of students to reach benchmark goals.

Percentages are approximate and a general guide for system-wide goal setting.

Boundaries are not absolute and may represent a difference in intensity rather than program.



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ODM Step 2: Validate Need for Support

ODM Step	Questions: Systems	Questions: Student
1. Identify Need for Support	Are there students who may need support? How many students may need support?	Which students may need support?
2. Validate Need for Support	Are we reasonably confident in the accuracy of our data overall?	Are we reasonably confident that the identified students need support?
3. Plan and Implement Support	At what grade levels and/or in what areas may support be needed? What are our system-wide goals? What is our system-wide plan for support?	What are the student's skills and needs? What is the plan of support for the student, including goals and plan for progress monitoring?
4. Evaluate and Modify Support	Are we making progress toward our system-wide goals? Is our system of support effective?	Is each student making adequate progress? Is the support effective for individual students?
5. Review Outcomes	Have we met our system-wide goal? Is our system of support effective? *Are there students who may need support? How many students may need support?*	Has the support been effective for individual students? Has the student met his/her goal? *Which students may need support?*

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ODM Step 2: Validate Need for Support System Level

Before moving forward to plan instruction, scan the system level data:

- Are we *reasonably confident* that the data were collected accurately?
- Did all assessors receive adequate training and practice?
- Did we conduct accuracy checks and/or shadow scoring?
- Are there inconsistencies in the pattern of data?

What data can you use?

- Assessment Accuracy Checklists
- Shadow Scoring Documentation

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ODM Step 1 & 2: Identify Need for Support and Validate Need for Support

ODM Step	Questions: Systems	Questions: Student
1. Identify Need for Support	Are there students who may need support? How many students may need support?	Which students may need support?
2. Validate Need for Support	Are we reasonably confident in the accuracy of our data overall?	Are we reasonably confident that the identified students need support?
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Step 1: Identify Need for Support Student Level

Which Students May Need Support?

The *Classroom or Instructional Group Report* provides information on individual students at a given assessment period. The Classroom Report includes all the students from one class.

The Classroom Report shows:

- The student's score on each measure and on the DIBELS Math composite.
- The likely need for support category (i.e., Needs Core, Strategic, or Intensive Support) for the student's score on each measure and on the composite.
- Percentile ranks for the student's score on each measure to show the student's performance in relation to all participating students in the district.

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Sample Classroom Report: Beginning of First Grade

School: Mockingbird Elementary School
Grade: First Grade, Beginning of Year
Year: 2014-2015
Class: Mock Grade1a

Classroom Report

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DIBELS Math Early Release Years 3 & 4

At or Above Benchmark / Likely to Need Core Support | Below Benchmark / Likely to Need Strategic Support | Well Below Benchmark / Likely to Need Intensive Support

	NID		NNF		AQD		MNF		COMPUTATION		COMPOSITE	
NAME	Score	Local Percentile	Score	Local Percentile	Score	Local Percentile	Score	Local Percentile	Score	Local Percentile	Score ▲	Local Percentile
Praseme, Laura	8	5	4	1	0	3	0	1	2	11	28	1
Arkansite, Stephanie	8	5	6	7	2	8	1	5	3	18	47	4
Lightfoot, Antonio	13	14	6	7	6	21	1	5	0	3	48	7
Fulvous, Sandra	7	1	7	12	8	33	2	13	0	3	54	9
Green, Anne	12	12	10	30	2	8	2	13	4	32	72	15
Loveless, Lillian	9	9	9	25	0	3	2	13	7	72	74	18
Cardinal, Anthony	17	22	8	18	7	28	3	26	4	32	86	20
Ridge, Victor	29	46	8	18	6	21	3	26	2	11	88	23
Gudmundite, Eric	18	25	8	18	6	21	3	26	9	86	105	28
Burgundy, Amy	29	46	10	30	11	46	4	43	3	18	113	31
Diamond, Kenneth	28	41	13	59	16	70	5	58	4	32	140	50
Elwood, Heather	36	62	14	68	6	21	7	82	4	32	141	53
Sunstone, Dorothy	29	46	12	49	14	58	6	68	5	54	143	58
Metzcalf, Daniel	45	79	10	30	15	64	7	82	5	54	160	66
Petersen, Peter	47	88	14	68	19	82	3	26	6	66	166	72
Winchell, Walter	35	58	15	76	21	88	5	58	9	86	183	77
Stone, Scott	46	84	17	91	22	91	6	68	8	78	203	88
Valentine, Andrea	55	99	17	91	26	93	7	82	9	86	229	93
GOAL	25		12		10		4		5		124	
AVERAGE	26.2		10.4		10.4		3.7		4.7		115.6	

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Validate Need for Support at the Student Level

What do you need to know?

- Are we *reasonably confident* the student needs instructional support?
  - Rule out easy reasons for unexpected performance: bad day, confused on directions or task, ill, shy, or error in assessment administration

What data can you use?

- Any additional available assessment data
- Repeat DIBELS Math assessments using progress monitoring booklets.
  - General guideline: At least 2 more times, not on the same day but within 1 week

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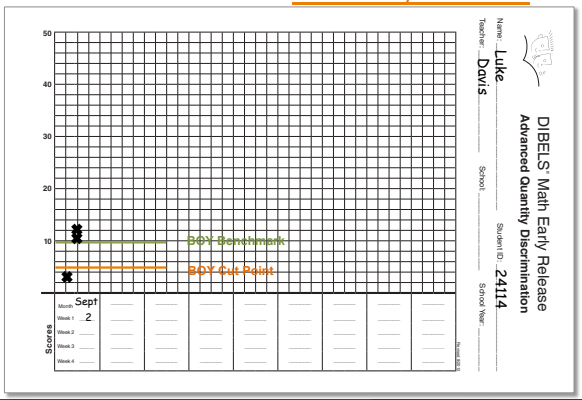
Validate Need for Support

Verify need for instructional support by retesting with alternate forms until we are reasonably confident.



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ODM Step 3: Plan Support

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Setting System-Wide Goals

At Clover School, 59% of students scored at/above the Composite Score benchmark at the beginning of first grade.

- 68% scored at/above the benchmark on NIF
- 55% scored at/above the benchmark on NNF
- 58% scored at/above the benchmark on AQD
- 66% scored at/above the benchmark on MNF
- 57% scored at/above the benchmark on Computation

Our goal is that at the end of the year (EOY), ___% of first grade students will have early numeracy and basic computational skills at a level at which they score at/above the benchmark goal on the DIBELS Math Composite Score and on all of the component measures/skills.

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Plan Support at the System Level: Summary of Clover Elementary School

- What are system-wide goals for first grade at Clover Elementary School?
- What is the plan for achieving system goals?
  - Need for strong core in foundational early numeracy skills in Kindergarten
  - Need for differentiated instruction for all students in first grade
  - Need for targeted support in foundational early numeracy skills and basic computation skills in first semester of first grade

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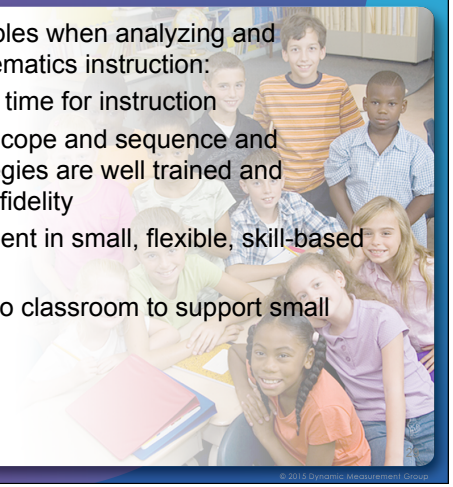
What Is Our Plan to Achieve System Goals?

Consider these variables when analyzing and improving core mathematics instruction:

- Protected block of time for instruction
- Research-based scope and sequence and instructional strategies are well trained and implemented with fidelity
- Majority of time spent in small, flexible, skill-based groups
- Resources come to classroom to support small groups



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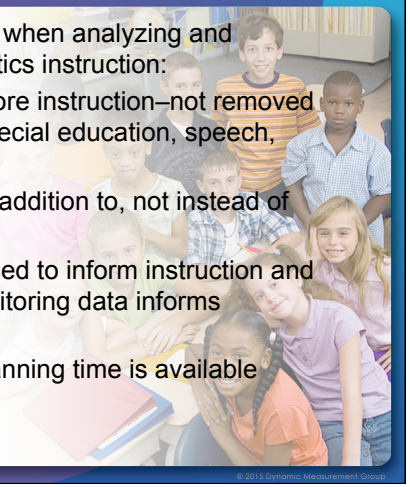
What Is Our Plan to Achieve System Goals?

Consider these variables when analyzing and improving core mathematics instruction:

- All students receive core instruction–not removed from classroom for special education, speech, etc.
- Tier 2 supports are in addition to, not instead of Tier 1
- Screening data are used to inform instruction and groups; progress monitoring data informs changing groups
- Sufficient common planning time is available weekly



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ODM Step 3: Plan Support

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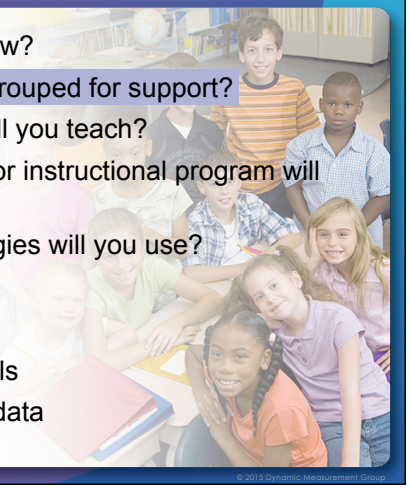
Step 3: Planning Support at the Student Level

What do you need to know?

- How will children be grouped for support?
- What specific skills will you teach?
- What curriculum and/or instructional program will you use?
- What materials/strategies will you use?

What data can you use?

- Classroom Report
- Individual test protocols
- Additional diagnostic data



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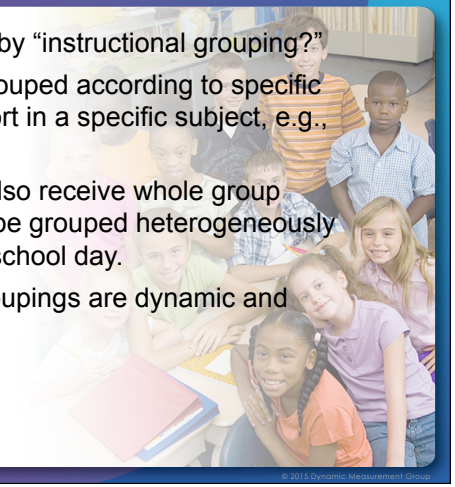
What Is Instructional Grouping and Why Do It?

- What do we mean by "instructional grouping?"
  - Students are grouped according to specific needs for support in a specific subject, e.g., math.
  - Students may also receive whole group instruction and be grouped heterogeneously for most of the school day.
  - Instructional groupings are dynamic and flexible.



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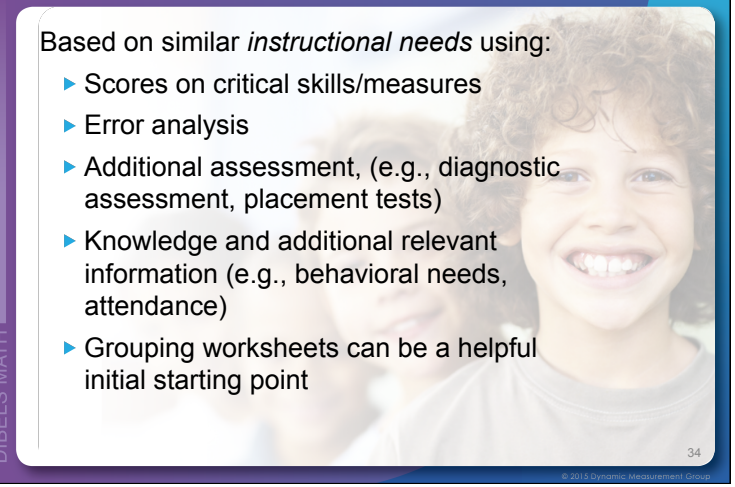
How Will Students Be Grouped?

Based on similar *instructional needs* using:

- Scores on critical skills/measures
- Error analysis
- Additional assessment, (e.g., diagnostic assessment, placement tests)
- Knowledge and additional relevant information (e.g., behavioral needs, attendance)
- Grouping worksheets can be a helpful initial starting point



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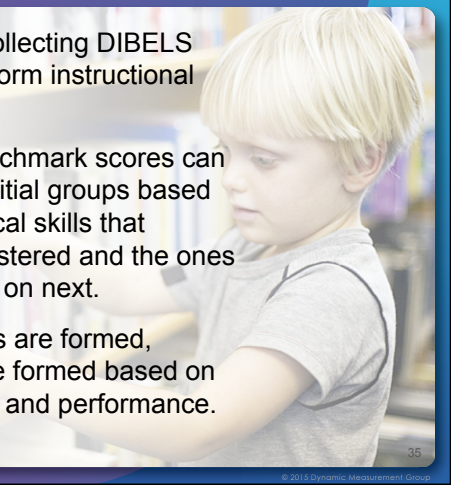
Instructional Grouping: Summary

- One purpose of collecting DIBELS Math data is to inform instructional groups.
- DIBELS Math benchmark scores can be used to form initial groups based on the mathematical skills that students have mastered and the ones they need to work on next.
- Once initial groups are formed, subgroups may be formed based on patterns of scores and performance.



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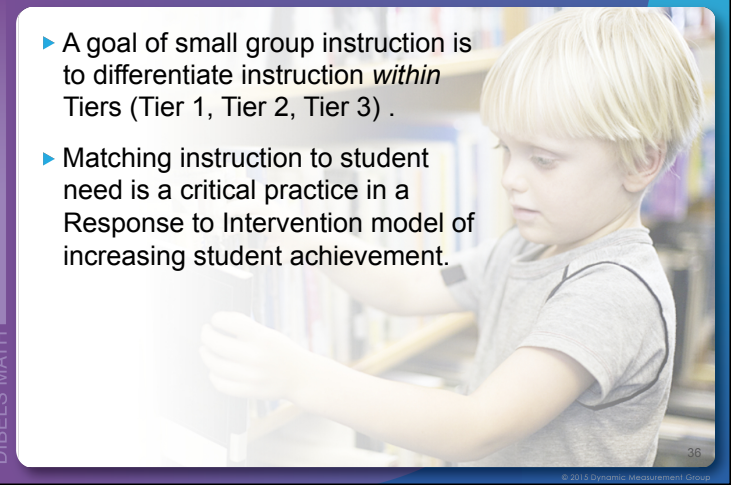
Instructional Grouping: Summary

- A goal of small group instruction is to differentiate instruction *within* Tiers (Tier 1, Tier 2, Tier 3) .
- Matching instruction to student need is a critical practice in a Response to Intervention model of increasing student achievement.



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What Specific Skills?

For specific skill level use:

- Error analysis of DIBELS Math performance
- Knowledge of child performance in class
- Curriculum-linked assessment, e.g., mastery measures, end of unit tests
- Diagnostic assessment as needed

The primary questions are:

- *What can the student do?*
- *What has the student been taught?*
- *On what specific skills does the student need support?*

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ODM Step 4: Evaluate Support

ODM Step	Questions: Systems	Questions: Student
1. Identify Need for Support	Are there students who may need support? How many students may need support?	Which students may need support?
2. Validate Need for Support	Are we reasonably confident in the accuracy of our data overall?	Are we reasonably confident that the identified students need support?
3. Plan and Implement Support	At what grade levels and/or in what areas may support be needed? What are our system-wide goals? What is our system-wide plan for support?	What are the student's skills and needs? What is the plan of support for the student, including goals and plan for progress monitoring?
4. Evaluate and Modify Support	Are we making progress toward our system-wide goals? Is our system of support effective?	Is each student making adequate progress? Is the support effective for individual students?
5. Review Outcomes	Have we met our system-wide goal? Is our system of support effective? *Are there students who may need support? How many students may need support?*	Has the support been effective for individual students? Has the student met his/her goal? *Which students may need support?*

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Why Is Progress Monitoring Important?

- Assessments that are sensitive to student growth over time allows for informed decision-making.
- When teachers use student progress monitoring data to inform instruction students' learning improves. Additionally students become more aware of their own performance.

(Deno, 2003; Fuchs, Deno, & Mirkin, 1984; Good & Jefferson, 1998).

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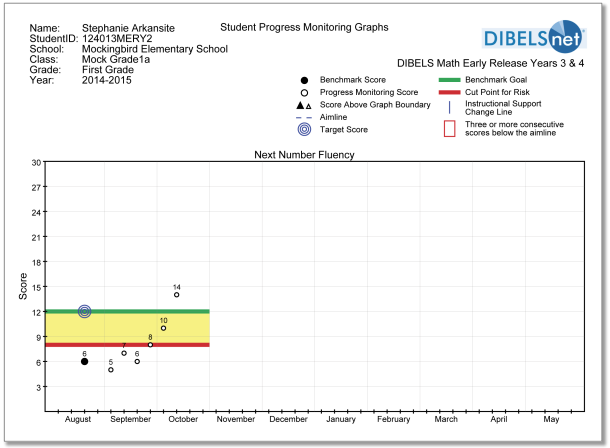
Sample Progress Monitoring DIBELSnet® Report



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Basic Steps for Individual Student Progress Monitoring

1. Select students for progress monitoring
2. Determine which DIBELS materials should be used.
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Selecting Students for Progress Monitoring

- Candidates for progress monitoring are those who scored below or well below the benchmark goal, and probably need a change to instruction.
- Progress monitoring will help evaluate the effectiveness of the change.
- However, progress monitoring can be a complex decision making process that can be difficult to do with lots and lots of students.
- When there are many students below the benchmark goal, work on improving core instruction and carefully select the students who will be monitored.
- If you collect progress monitoring data, then you need to review it for the feedback to be effective.

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Selecting Students for Progress Monitoring

School: Mockingbird Elementary School
Grade: First Grade, Beginning of Year
Year: 2014-2015
Class: Mock Grade1a

Classroom Report

DIBELSnet

DIBELS Math Early Release Years 3 & 4

At or Above Benchmark / Likely to Need Core Support | Below Benchmark / Likely to Need Strategic Support | Well Below Benchmark / Likely to Need Intensive Support

NAME	NID		NNF		AQD		MNF		COMPUTATION		COMPOSITE	
	Score	Local Percentile	Score	Local Percentile	Score	Local Percentile	Score	Local Percentile	Score	Local Percentile	Score ▲	Local Percentile
Praseme, Laura	8	5	4	1	0	3	0	1	2	11	28	1
Arkansite, Stephanie	8	5	6	7	2	8	1	5	3	18	47	4
Lightfoot, Antonio	13	14	6	7	6	21	1	5	0	3	48	7
Fulvous, Sandra	7	1	7	12	8	33	2	13	0	3	54	9
Green, Anne	12	12	10	30	2	8	2	13	4	32	72	15
Loveless, Lillian	9	9	9	25	0	3	2	13	7	72	74	18
Cardinal, Anthony	17	22	8	18	7	28	3	26	4	32	86	20
Ridge, Victor	29	46	8	18	6	21	3	26	2	11	88	23
Gudmundite, Eric	18	25	8	18	6	21	3	26	9	86	105	28
Burgundy, Amy	29	46	10	30	11	46	4	43	3	18	113	31
Diamond, Kenneth	28	41	13	59	16	70	5	58	4	32	140	50
Elwood, Heather	36	62	14	68	6	21	7	82	4	32	141	53
Sunstone, Dorothy	29	46	12	49	14	58	6	68	5	54	143	58
Metzcalf, Daniel	45	79	10	30	15	64	7	82	5	54	160	66
Petersen, Peter	47	88	14	68	19	82	3	26	6	66	166	72
Winchell, Walter	35	58	15	76	21	88	5	58	9	86	183	77
Stone, Scott	46	84	17	91	22	91	6	68	8	78	203	88
Valentine, Andrea	55	99	17	91	26	93	7	82	9	86	229	93
GOAL	25		12		10		4		5		124	
AVERAGE	26.2		10.4		10.4		3.7		4.7		115.6	

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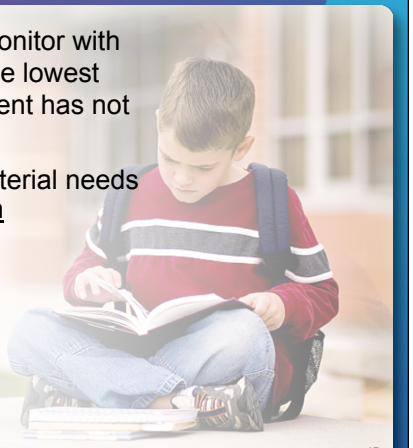
Selecting Progress Monitoring Materials Guidelines

In general, progress monitor with materials that match the lowest math skill that the student has not yet mastered

Progress monitoring material needs to be <u>sensitive to growth</u>

- Not too difficult
- Not too easy



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What Materials to Use–Example 1: Melissa, Beginning of Grade 1

- With this student, we would progress monitor with Computation.

Benchmark Assessment

DIBELS® Math Early Release
Grade 1

Name: _____ Student ID: _____

Teacher: _____ School: _____ School Year: _____

	Benchmark 1	Benchmark 2	Benchmark 3
Date			
Number Identification	28		
Next Number Fluency	21		
Advanced Quantity Discrimination	12		
Missing Number Fluency	7		
Computation Form A	3		
Computation Form B	4		
Computation (Form A + Form B)/2			

Revised 8/2016

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What Materials to Use–Example 2: Doug, Beginning of Grade 1

- With this student, we would progress monitor with Missing Number Fluency.

Benchmark Assessment

DIBELS® Math Early Release
Grade 1

Name: _____ Student ID: _____

Teacher: _____ School: _____ School Year: _____

	Benchmark 1	Benchmark 2	Benchmark 3
Date			
Number Identification	28		
Next Number Fluency	16		
Advanced Quantity Discrimination	18		
Missing Number Fluency	2		
Computation Form A	4		
Computation Form B	3		
Computation (Form A + Form B)/2			

Revised 8/2016

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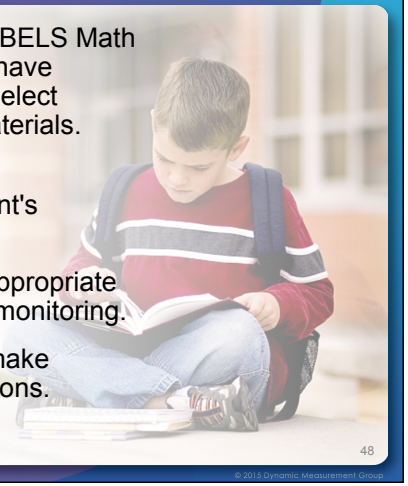
DIBELS® Math Survey Level Assessment

Consider conducting DIBELS Math survey when you don't have enough information to select progress monitoring materials.

Purpose(s)

- To identify a student's instructional level.
- To determine an appropriate level for progress monitoring.
- To set goals and make instructional decisions.



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Survey Level Assessment Procedures

1. Start with on grade level benchmark scores.
2. If the Composite Score is well below benchmark, then test backwards. You can also test backwards if individual measures are well below benchmark.
3. Test back sequentially until you find the measure on which the student scores at/above benchmark based on the end of the year benchmark goals for that grade.
4. Progress monitor one level above where students are at/above benchmark (e.g. if a 5th grade student is at/above benchmark on 3rd grade materials, but well below/below benchmark on 4th grade materials, monitor on 4th grade materials).

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Basic Steps for Individual Student Progress Monitoring

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5. Evaluate progress toward the instructional goal. Modify the instructional plan as needed.

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Well-Written Goals When Monitoring with Grade Level Material

When monitoring with grade-level material, use the next benchmark goal for that measure.

- Grade-level material includes any measure used for benchmark assessment in that grade

  K: BQD, NIF, NNF

  1st: NIF, NNF, ADQ, MNF, Computation

  2nd–6th: Computation, Concepts & Applications

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Components of Well-Written Goals

Learner:
- Name of student

Behavior:
- What is it that you want the student to do (i.e., correct digits, etc.)?

Criterion:
- How much of the behavior does the student have to do?

Conditions:
- Time frame typically determined by number of weeks until benchmark assessment or end-of-school year
- Measurement material (i.e., guided data collected via DIBELS Math Missing Number Fluency)

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Well-Written Goal Example

First Grade:

By the end of the year, Jason will score 15 correct digits on a 1st grade level Computation probe.

Kindergarten:

By the end of the year, Heather will score 25 correctly identified numbers on a Number Identification Fluency probe.

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Well-Written Goals When Monitoring with Out-of-Grade Level Material

- There are multiple statistical approaches to out-of-grade level goal setting. Determining goals through a variety of methods typically results in the same goal. Some methods are more time consuming and require complex mathematical calculations.
- The least time consuming way to end up with a reasonable goal is to use the end of the year goal and students need to reach it in half the amount of time.

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Steps for Setting Out-of-Grade Progress Monitoring Goals

1. Determine students current level of performance (e.g., testing backwards using DIBELS Math materials).
2. Determine the goal based on the progress monitoring level and the end-of-year benchmark goal for that level (e.g., 16 correct digits in second-grade Computation).
3. Set the goal date so that the goal is achieved in half the time in which it would typically be achieved (e.g., move the end-of-year benchmark goal to be achieved by the middle-of-year benchmark time).
4. Draw an aimline connecting the current performance to the goal.

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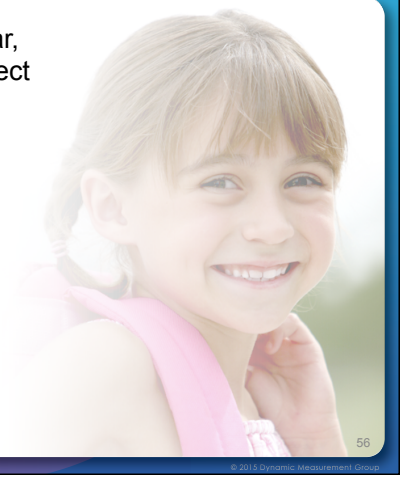
Well-Written Out-of-Grade Goal Example

By the middle of the year, Tiarra will score 16 correct digits on a 2nd grade Computation probe.



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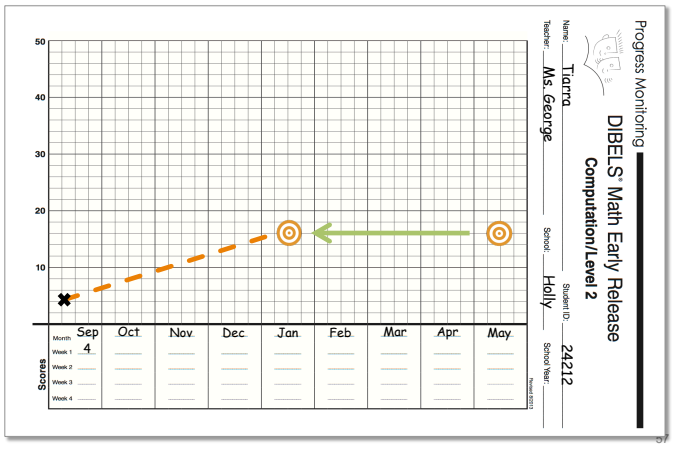
Out-of-Grade Level Goal Setting Tiarra, 4th Grade



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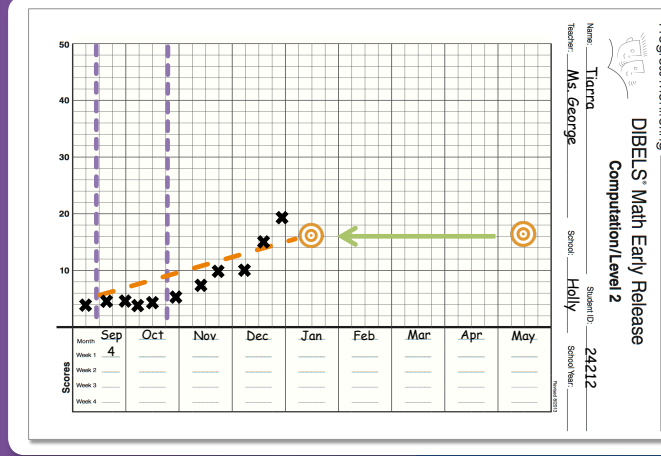
Evaluating Progress and Changing Levels Example: Tiarra, 4th Grader



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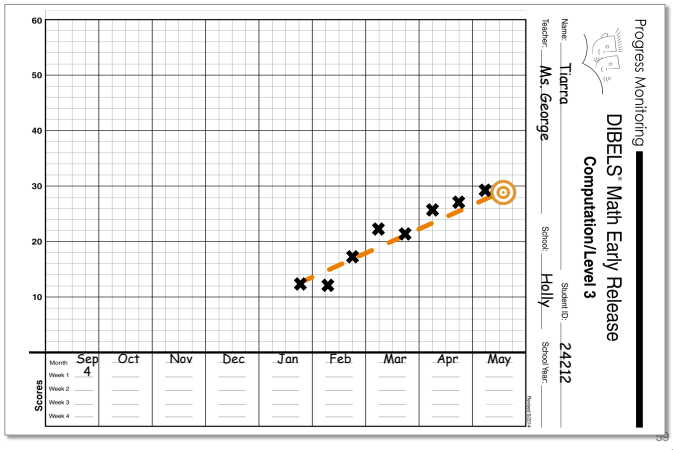
Evaluating Progress and Changing Levels Example: Tiarra, 4th Grader



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Progress Monitoring Step 3: Determine Frequency

PM frequency guidelines:

- If monitoring in grade-level materials
  - If the student's scores fall into the ***Below Benchmark*** level, monitoring one or two times per month is likely sufficient.
  - If scores fall into the ***Well Below Benchmark*** level, monitoring once per week is ideal, though once every other week may be sufficient.
- If monitoring a student in out-of-grade materials, monitoring once per week is ideal, though every other week may be sufficient.

Note: Progress monitoring is the assessment that evaluates instruction. Instruction and intervention should be provided that matches student need.

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ODM Step 5: Review Outcomes

ODM Step	Questions: Systems	Questions: Student
1. Identify Need for Support	Are there students who may need support? How many students may need support?	Which students may need support?
2. Validate Need for Support	Are we reasonably confident in the accuracy of our data overall?	Are we reasonably confident that the identified students need support?
3. Plan and Implement Support	At what grade levels and/or in what areas may support be needed? What are our system-wide goals? What is our system-wide plan for support?	What are the student's skills and needs? What is the plan of support for the student, including goals and plan for progress monitoring?
4. Evaluate and Modify Support	Are we making progress toward our system-wide goals? Is our system of support effective?	Is each student making adequate progress? Is the support effective for individual students?
5. Review Outcomes	Have we met our system-wide goal? Is our system of support effective? *Are there students who may need support? How many students may need support?*	Has the support been effective for individual students? Has the student met his/her goal? *Which students may need support?*

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Considerations in Evaluating Progress Monitoring Data

Considerations for Decision Making:

- Give the instruction/intervention enough time to work.
- Is the student's progress generally up?
- Is the student receiving research-based instruction?
- Is the instruction focused on the right skill?
- Is the instruction/intervention being implemented with fidelity?

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Considerations in Evaluating Progress Monitoring Data

- Review progress relative to the goal, the aimline and the Pathways (when Pathways are available for DIBELS Math)
- If insufficient progress consider:
  - increasing opportunities to respond (increase amount of time and/or frequency, decrease group size)
  - changing focus of instruction
  - getting more explicit
- When student reaches the goal, make a change
  - fade support, move to next skill, move to next level of monitoring material

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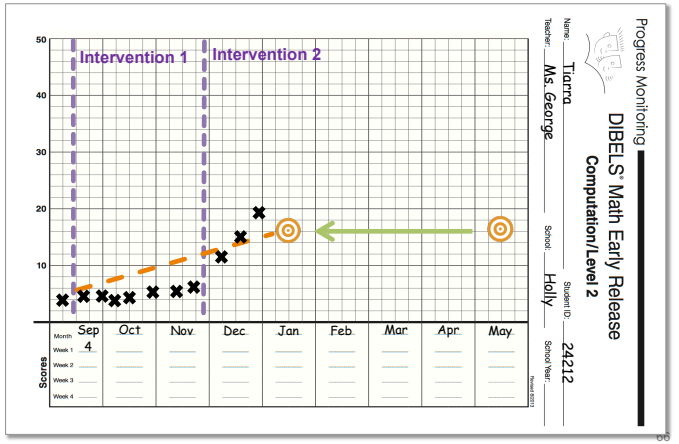
Evaluating Progress and Changing Levels Example: Tiarra, 4th Grader



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ODM Step 5: Review Outcomes Systems Level (EOY)

Systems Level

- Is the system of support generally effective to support most students to reach mathematics outcomes?
  - Determined by percent of students who meet benchmark goals or have made adequate progress toward benchmark goals
    - If a large proportion of students do not meet benchmark goals and/or do not make adequate progress, a change in system-level support may be necessary

Student Level

- Have the students who were Below or Well Below Benchmark made progress toward the next benchmark goal?

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Themes–We Can Build Futures If We:

- SUPPORT students, teachers, schools.
- CARE about math outcomes.
- START EARLY: Trajectories are difficult to change
- SET ambitious goals.
- TEACH the early math skills.

- MONITOR progress toward goals.
- DO SOMETHING if/when students are not on track.
- CELEBRATE successes!

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