

Using DIBELS Next® to Predict Performance on Statewide ELA Assessments: *A Tale of Two Tests*

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We would like to thank John Wilson, Research, Evaluation, and Assessment Director for the Tempe, Arizona school district of his support in securing AzMERIT data and in consulting with us about data results.

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Finally, the DMG staff who daily keep our research moving forward.

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<https://dibels.org/pubs.html>



Purpose of the Study

The purpose of this study is to examine expectations for reading proficiency in context of Common Core State Standards assessments (CCSS) such as AzMERIT and Smarter Balanced and how DIBELS Next can inform decisions about student skills.



Methodology: Participants

Large School District, Arizona

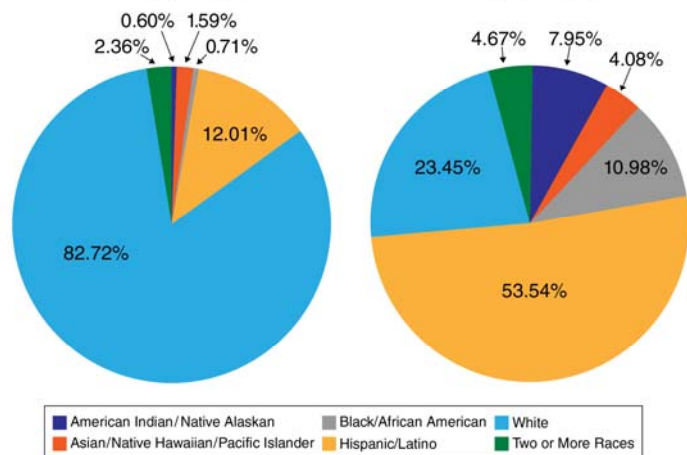
- Assessment: AzMERIT ELA
- 2014–2015 School Year
- Grades 3–4
- Number of schools: 16
- $n = 1,256$ (664 third-graders, 592 fourth-graders)

Large School District, Oregon

- Assessment: SBAC ELA
- 2015–2016 School Year
- Grades 3–5
- Number of schools: 18
- $n = 2,138$ (758 third-graders, 696 fourth-graders, 684 fifth-graders)

Demographics

District 1 Demographics (OR) 2015–2016 District 2 Demographics (AZ) 2014–2015



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Correlations between DIBELS Next DORF Words Correct, DCS, and SBAC ELA Score

Grade and Time of Year	DORF Words Correct Correlated with SBAC ELA Score	DIBELS Composite Score Correlated with SBAC ELA Score	Additional Variance Explained by DIBELS Next Composite Score
Grade 3 Beginning of Year	.670	.708	5%
Grade 3 Middle of Year	.697	.739	6%
Grade 3 End of Year	.700	.751	7%
Grade 4 Beginning of Year	.683	.721	5%
Grade 4 Middle of Year	.681	.718	5%
Grade 4 End of Year	.675	.726	7%

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Correlations—DIBELS Next with AzMERIT

Grade and Time of Year	DORF Words Correct Correlated with AzMERIT ELA Score	DIBELS Composite Score Correlated with AzMERIT ELA Score	Additional Variance Explained by DIBELS Next Composite Score
Grade 3 Beginning of Year	.672	.731	8%
Grade 3 Middle of Year	.699	.740	6%
Grade 3 End of Year	.672	.721	7%
Grade 4 Beginning of Year	.714	.759	7%
Grade 4 Middle of Year	.715	.772	9%
Grade 4 End of Year	.702	.757	8%

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Smarter Balanced Assessment Consortium English Language Arts Achievement Standard (SBAC Standard)

Level 1 “has not met the achievement standard,”

Level 2 “has nearly met the achievement standard,”

Level 3 “has met the achievement standard,”

Level 4 “has exceeded the achievement standard.”

Table 1. SBAC English Language Arts Descriptive Levels with SBAC Achievement Standard (percentile)

Grade	Level 4	Level 3	Level 2	Level 1	SBAC Achievement Standard
3	>2489	2432–2489	2367–2431	<2367	58th Percentile
4	>2532	2473–2532	2416–2472	<2416	57th Percentile
5	>2581	2502–2581	2442–2501	<2442	52nd Percentile

Note: Linearly interpolated percentiles from <http://www.smarterbalanced.org/assessments/development/percentiles/> are provided in parentheses.

Meets or exceeds

Does not meet

8

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Arizona's Measurement of Educational Readiness to Inform Teaching ELA Achievement Standard (**AzMERIT Standard**)

Level 1 "minimally proficient,"

Level 2 "partially proficient,"

Level 3 "proficient,"

Level 4 "highly proficient."

Grade	Level 4	Level 3	Level 2	Level 1
3	2541–2605	2509–2540	2497–2508	2394–2496
4	2559–2610	2523–2558	2510–2522	2400–2509

Source: <https://cms.azed.gov/home/GetDocumentFile?id=571639b5aadebf0a04b267c9>

Meets or exceeds

Does not meet

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DIBELS Next Achievement Standard

Performance at or above the **40th percentile** on any high quality reading outcome measure was the achievement standard used to represent **adequate** reading proficiency for DIBELS Next.

For DIBELS Next, the Group Reading Assessment and Diagnostic Evaluation (GRADE) was used as an outcome measure representative of high-quality, group administered, standardized, norm-referenced reading assessments.

For example, on the SBAC, a score of **2410** is at the 40th percentile on SBAC national norms in third grade.

<http://www.smarterbalanced.org/assessments/development/percentiles/>
Accessed: 2018-02-06

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DIBELS Next Benchmark Goal

DIBELS Next Benchmark Goals are designed to identify the level where the odds are in favor of that student achieving later reading outcomes.

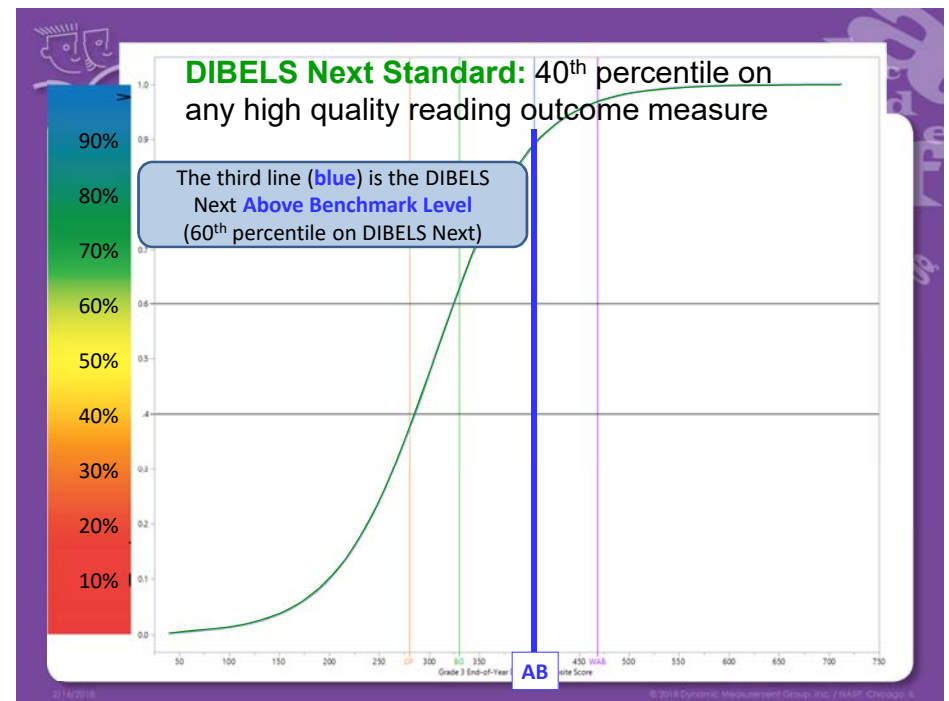
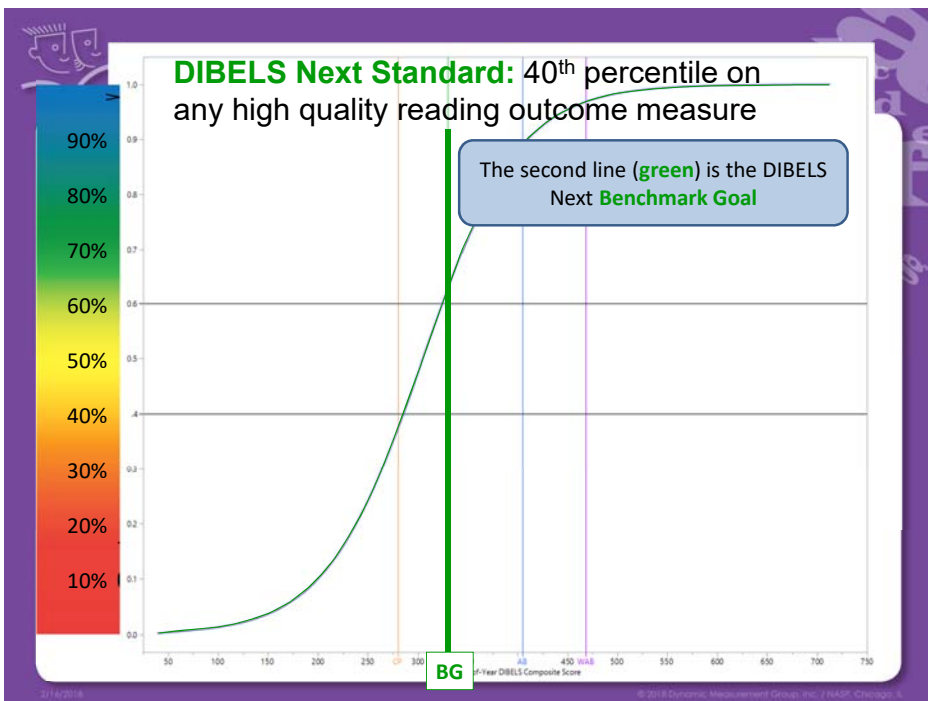
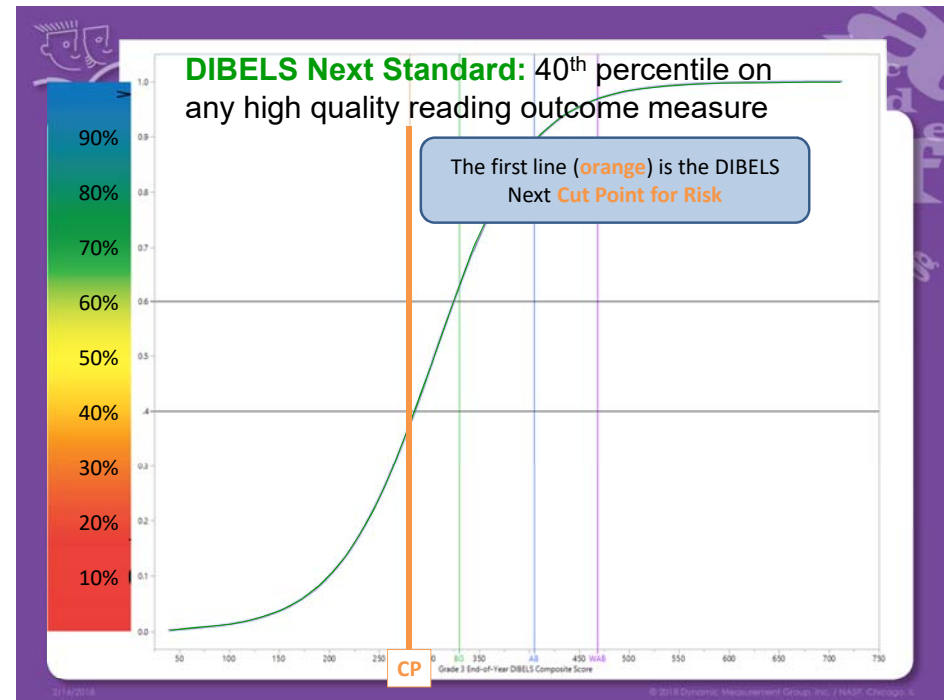
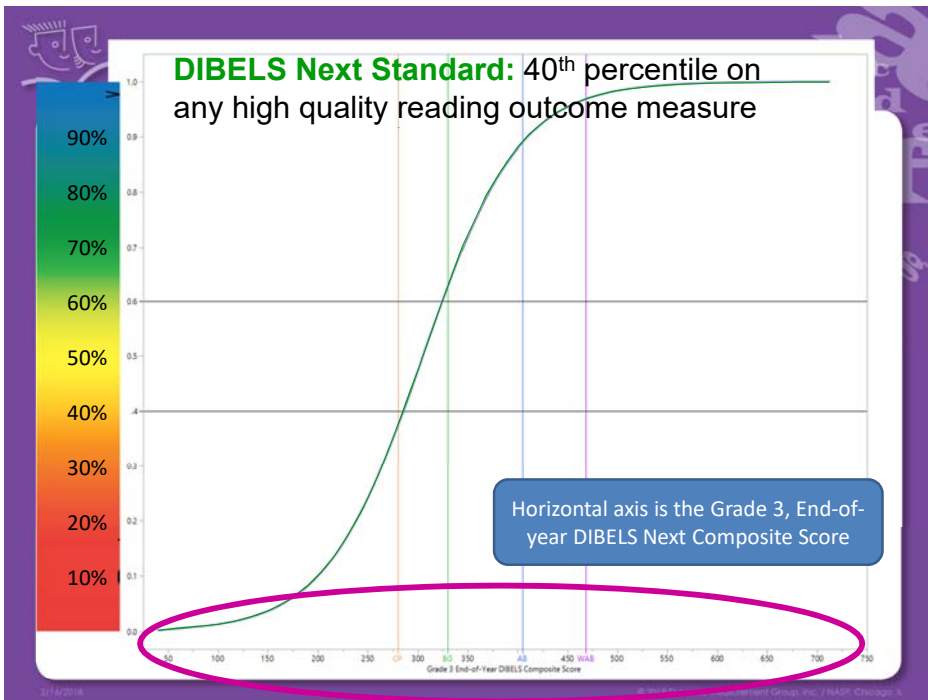
- ▶ **At or Above Benchmark:** Odds are generally 80% to 90% of achieving subsequent benchmark goals and important reading outcomes. **Student is likely to make adequate progress with effective core instruction.**
 - ▶ **Well Above Benchmark:** 80th percentile or higher
 - ▶ **Above Benchmark:** 60th percentile
 - ▶ **At Benchmark:** Benchmark goal to 59th percentile

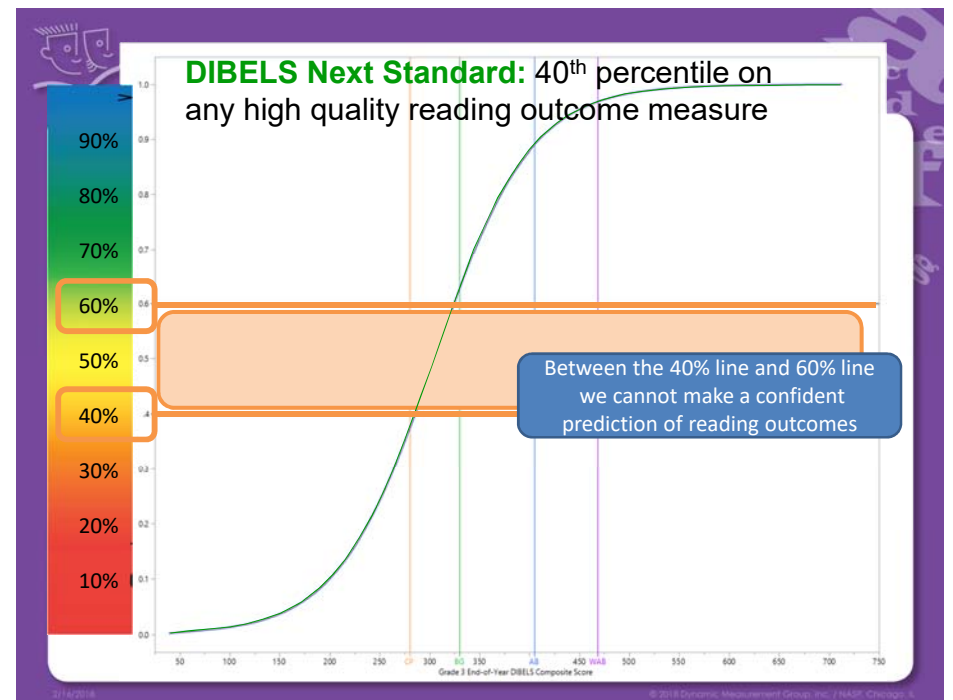
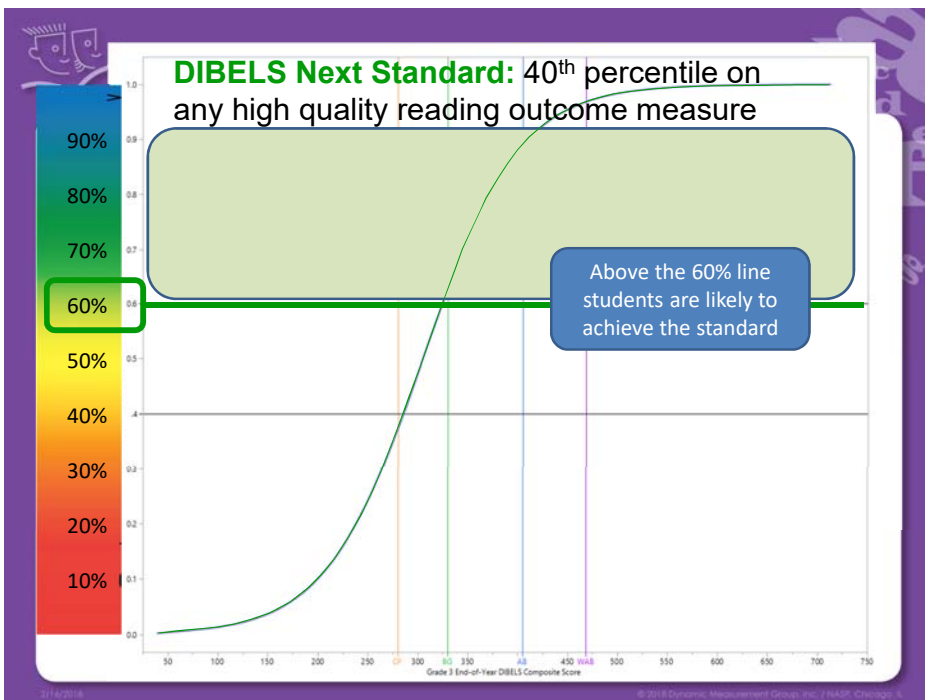
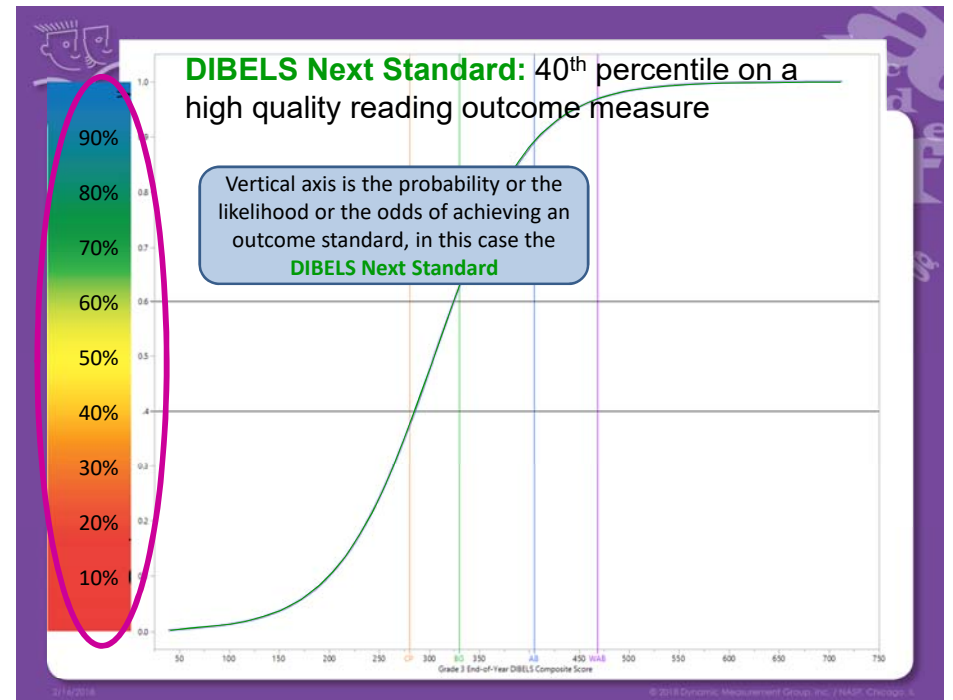
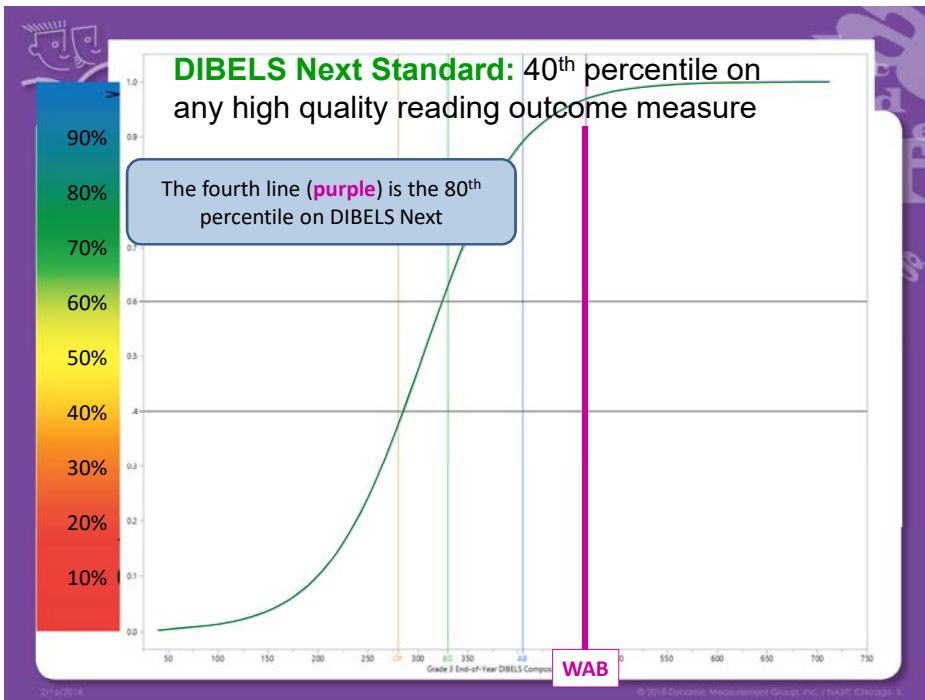
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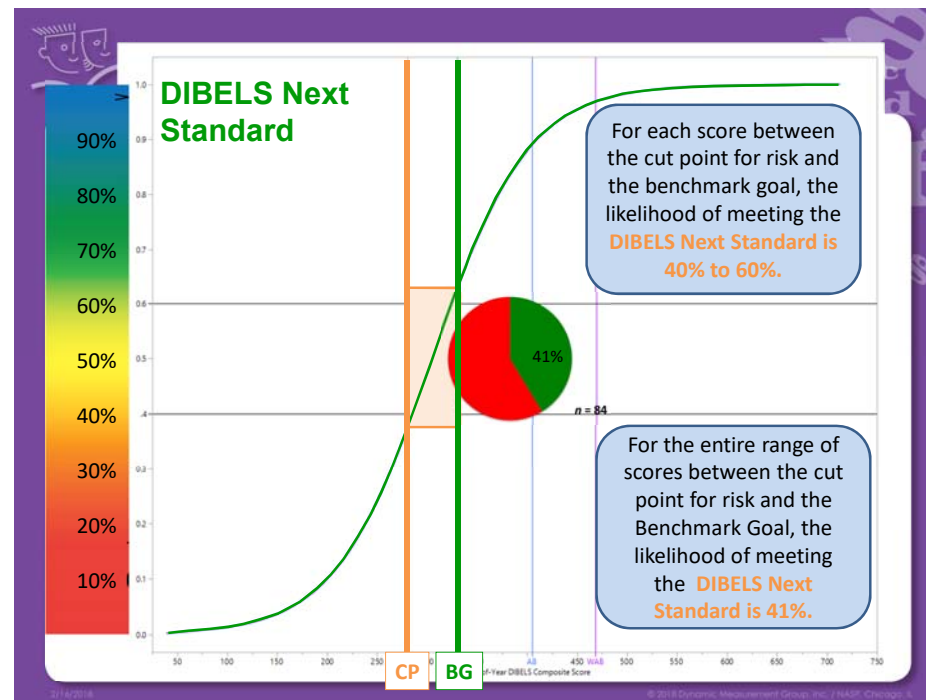
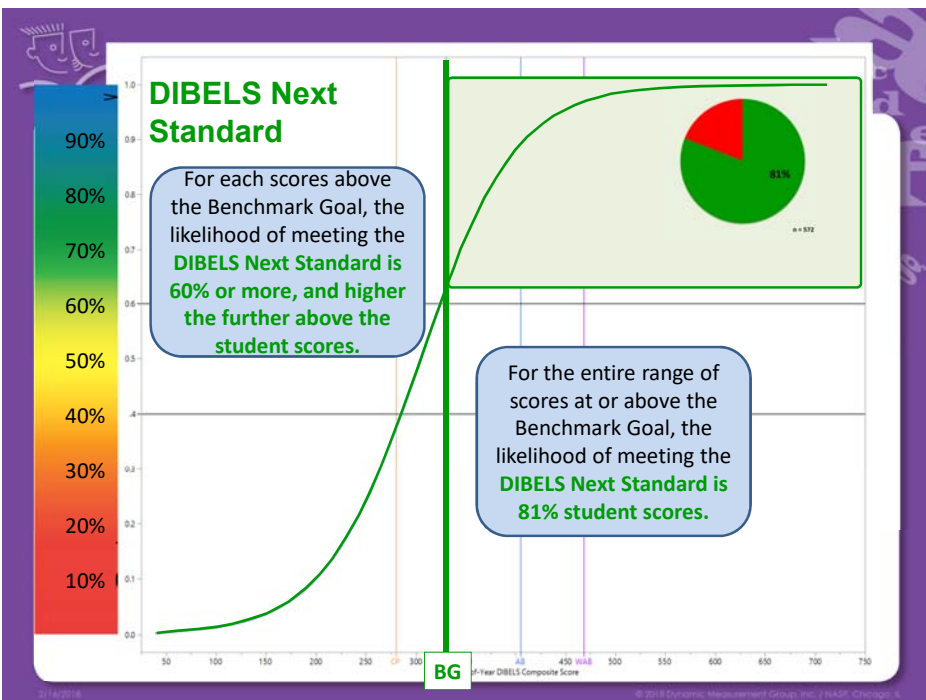
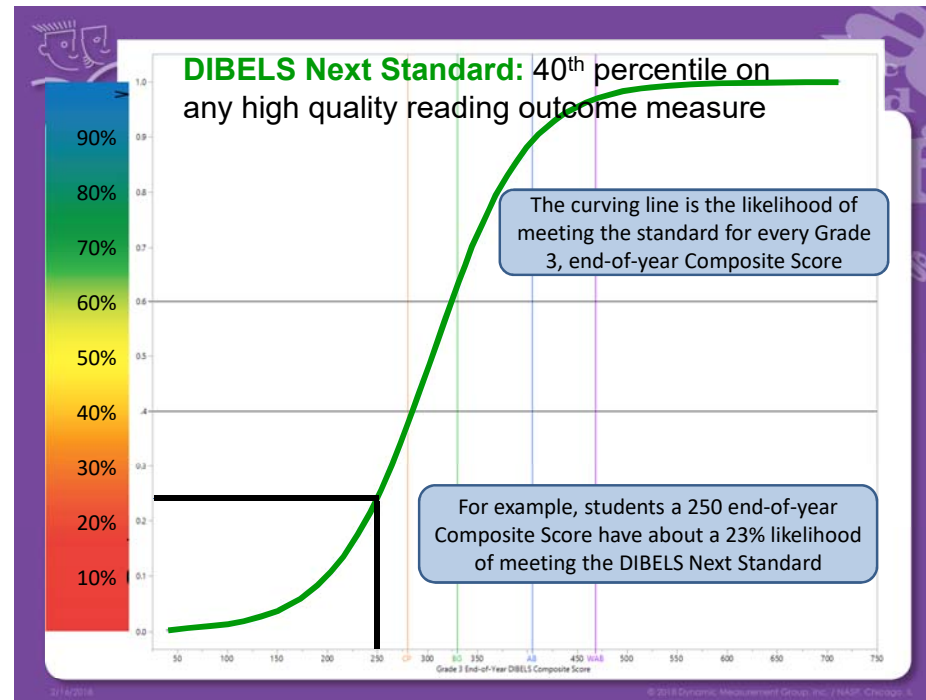
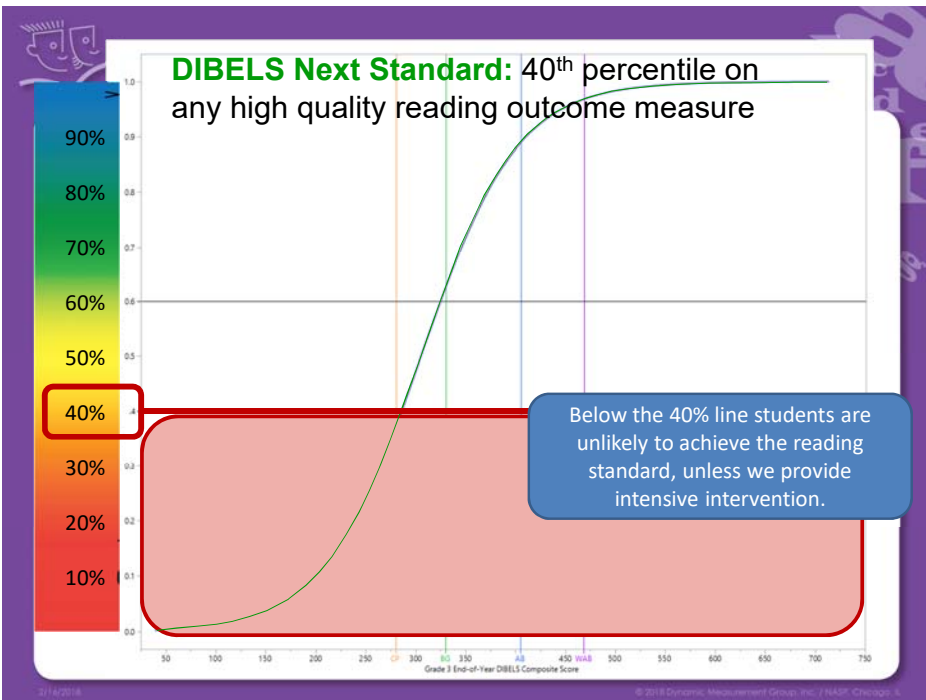
Likelihood of Meeting Later Reading Goals	Benchmark Status	Benchmark Status Including Above Benchmark
>99%	At or Above Benchmark overall likelihood of achieving subsequent early literacy goals: 80% to 90%	Above Benchmark overall likelihood of achieving subsequent early literacy goals: 90% to 99%
95%		At Benchmark overall likelihood of achieving subsequent early literacy goals: 70% to 85%
90%		
80%		
70%	Below Benchmark overall likelihood of achieving subsequent early literacy goals: 40% to 60%	Below Benchmark overall likelihood of achieving subsequent early literacy goals: 40% to 60%
60%		
55%		
50%	Well Below Benchmark overall likelihood of achieving subsequent early literacy goals: 10% to 20%	Well Below Benchmark overall likelihood of achieving subsequent early literacy goals: 10% to 20%
45%		
40%		
30%		
20%		
10%		
<5%		

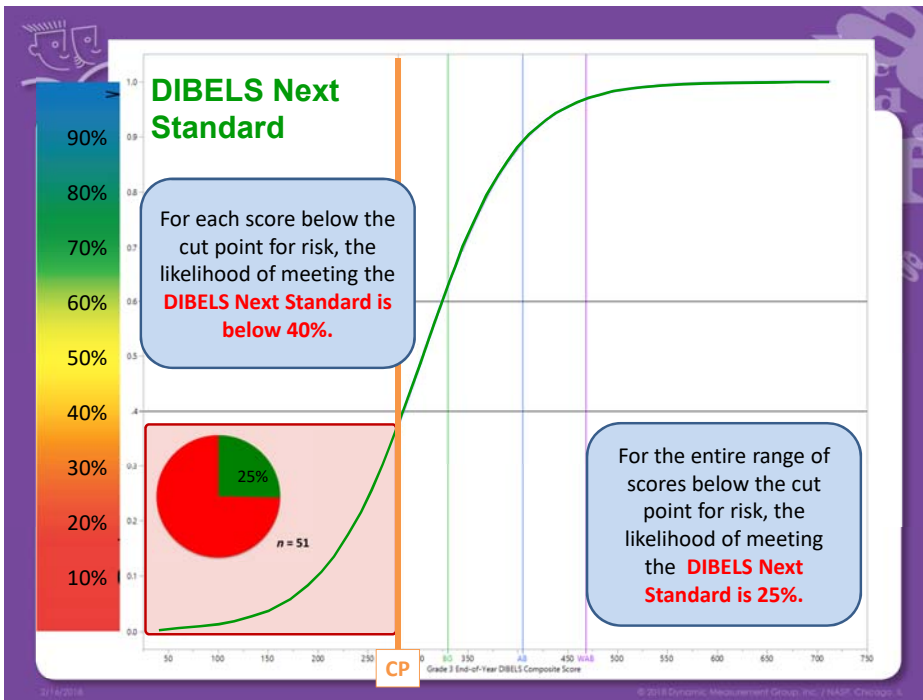
Likelihood of Meeting Later Reading Goals and DIBELS Next Benchmark Status

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Conclusions:

The DIBELS Next Benchmark Goal and cut point for risk are working well and as designed with respect to the **DIBELS Next Achievement Standard.**

- **At or Above Benchmark:** Odds are generally 80% to 90% of achieving subsequent benchmark goals and important reading 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 reading 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 reading outcomes. **Student is likely to need intensive support to make adequate progress.**

Smarter Balanced Assessment Consortium English Language Arts Achievement Standard (**SBAC Standard**)

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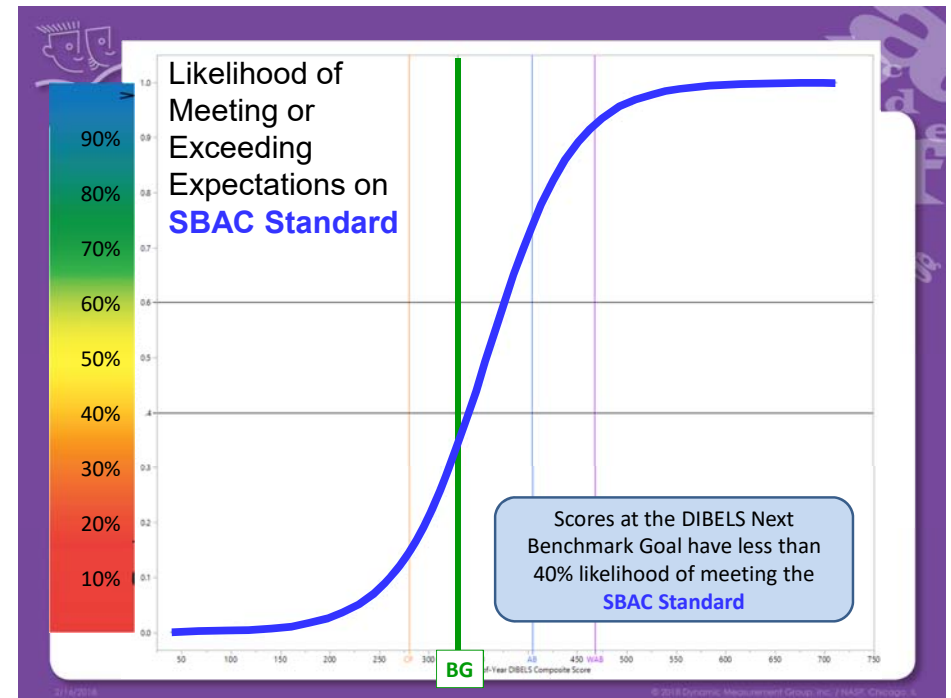
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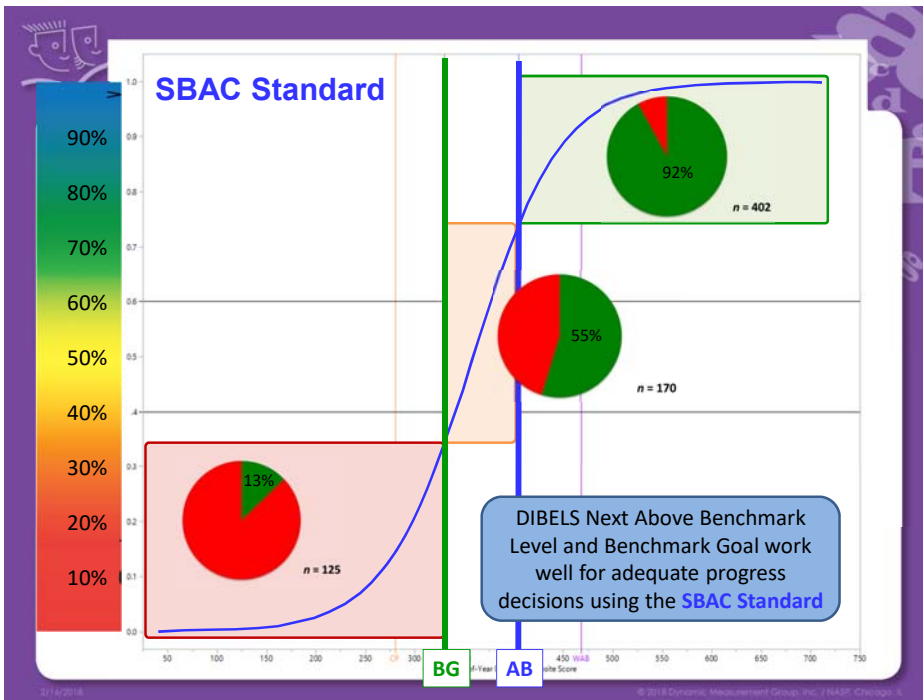
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Meets or exceeds **Does not meet**

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Arizona's Measurement of Educational Readiness to Inform Teaching ELA Achievement Standard (**AzMERIT Standard**)

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Source: <https://cms.azed.gov/home/GetDocumentFile?id=571639b5aadebf0a04b267c9>

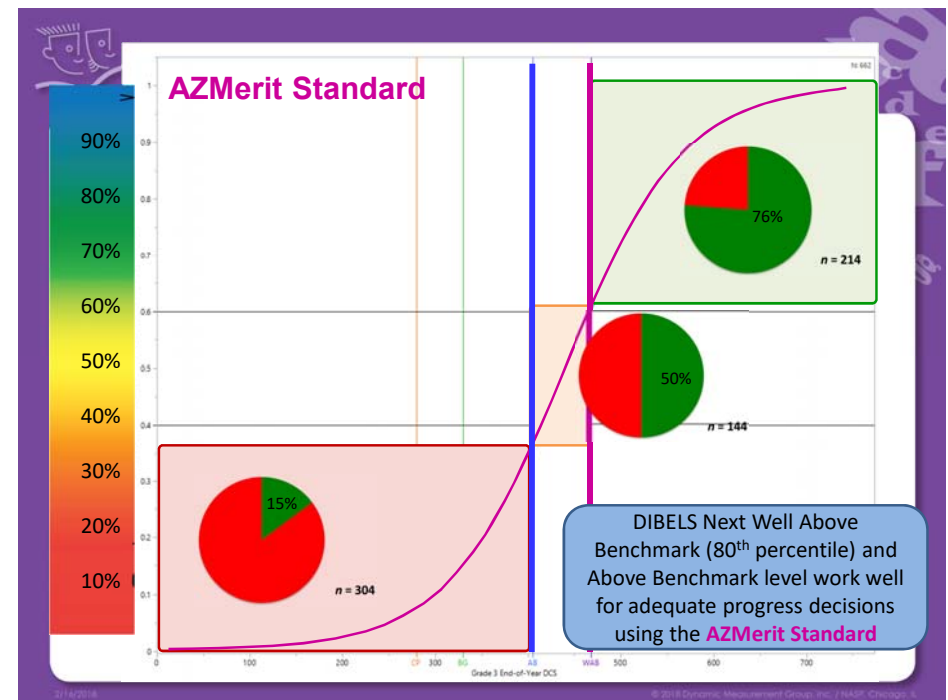
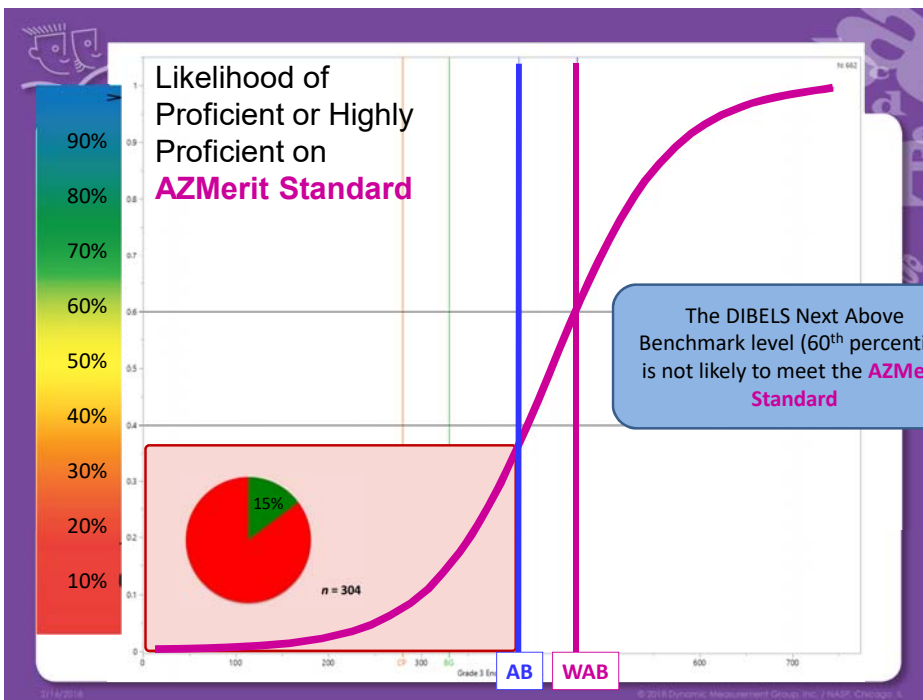
Meets or exceeds

Does not meet

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Different Standards (3rd Grade)

- DIBELS Next Benchmark Goal: 330 DIBELS Composite Score
 - 33rd percentile on DIBELS Next National Norms
- SBAC Standard: 2432
 - 51st percentile on SBAC National Norms
- AzMERIT Standard: 2509
 - 70th percentile on DIBELS Next National Norms using equi-percentile equating

<http://www.smarterbalanced.org/assessments/development/percentiles/>
 Accessed: 2018-02-06
<https://dibels.org/papers/DIBELSNextNormsTechReport17.pdf>



DIBELS Next Scores for AzMERIT Standard

Grade and Time of Year	DIBELS Next Composite Score corresponding to .40 or less estimated probability of meeting the AzMERIT ELA achievement standard	DIBELS Next Composite Score corresponding to .60 or greater estimated probability of meeting the AzMERIT ELA achievement standard
Grade 3 Beginning of Year	282 (57)	327 (73)
Grade 3 Middle of Year	350 (60)	397 (76)
Grade 3 End of Year	415 (63)	468 (80)
Grade 4 Beginning of Year	355 (65)	409 (81)
Grade 4 Middle of Year	402 (67)	454 (83)
Grade 4 End of Year	475 (70)	526 (85)

Note. Percentile rank corresponding to DIBELS Next Composite Score is in parentheses.



DIBELS Next Scores for SBAC Standard

Grade and Time of Year	DIBELS Next Composite Score Corresponding to .40 or less estimated probability of or exceeding meeting SBAC ELA achievement standard	DIBELS Next Composite Score Corresponding to .60 or greater estimated probability of meeting or exceeding SBAC ELA achievement standard
Grade 3 Beginning of Year	203 (28)	248 (43)
Grade 3 Middle of Year	276 (32)	317 (47)
Grade 3 End of Year	342 (37)	378 (50)
Grade 4 Beginning of Year	258 (32)	313 (50)
Grade 4 Middle of Year	313 (33)	360 (51)
Grade 4 End of Year	382 (34)	426 (51)

Note. Percentile rank corresponding to DIBELS Next Composite Score is in parentheses.



Conclusions: Relation to State Outcomes

1. The correlations between the DIBELS Next Composite Score and the SBAC ELA and AzMERIT ELA scores were strong, ranging from .71 to .77.
2. The DIBELS Next Composite Score explained more variance in outcomes than DORF Words Correct alone, ranging from 5% to 9% additional variance explained.



Conclusions: DIBELS Next Benchmark Goals

3. The DIBELS Next Benchmark goals function well for the purposes for which they were designed. Students who are at or above the DIBELS Next Benchmark Goals are likely to score at or above the 40th percentile on high quality reading outcome measures.
 - The DIBELS Next Benchmark goal has always been intended to represent **the lowest level of adequate reading.**
4. The DIBELS Next Benchmark goals are **not sufficient** to place the odds in favor of meeting or exceeding the **SBAC ELA achievement standard** or the **AzMERIT ELA achievement standard.**

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Conclusions SBAC ELA Achievement Standard

5. Students who score **Above Benchmark** on *DIBELS Next* are likely to meet or exceed SBAC ELA achievement standards
6. Between the **Benchmark Goal** and the **Above Benchmark** level, we cannot make a clear prediction.
7. Students who scored **Below Benchmark** on the DCS at any time of year are unlikely to meet the SBAC ELA achievement standard.
8. Students who scored **Well Below Benchmark** on DCS have very little chance of meeting the SBAC ELA achievement standard.

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Conclusions: AzMERIT ELA Achievement Standard

9. Students scoring **Well Above Benchmark** (80th percentile) on *DIBELS Next* are likely to meet or exceed the **AzMERIT ELA achievement standard,**
10. Between the **Above Benchmark** level and the 80th percentile, we cannot make a clear prediction.
11. Students who score **At Benchmark** or below on *DIBELS Next* are unlikely to meet the AzMERIT ELA achievement standards,
12. Students who score **Below Benchmark** or **Well Below benchmark** have very little chance of meeting the AzMERIT ELA achievement standard.

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Implications for Practice

In short, challenge each student.

1. If a student is in the **Below Benchmark** or **Well Below Benchmark**, go for **Benchmark** (go for the **Green**)
2. If a student is **At Benchmark**, go for **Above Benchmark** (go for the **Blue**)
3. If a student is **above benchmark**, go for the **80th percentile.**

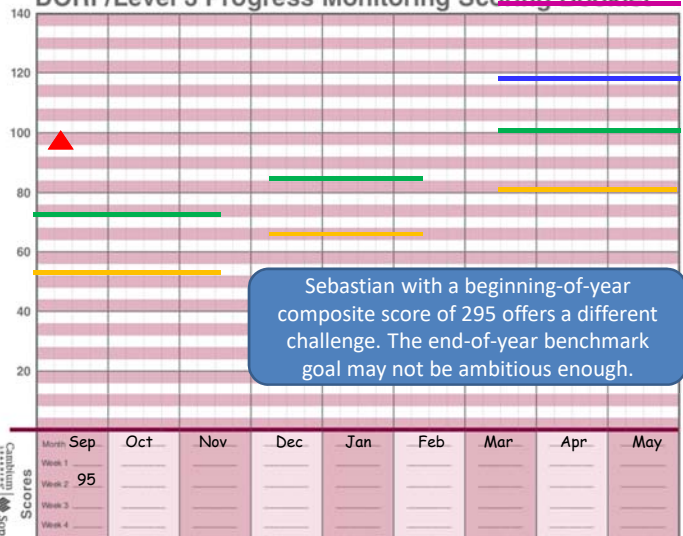
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Progress Monitoring

DORF
LEVEL
3

DORF/Level 3 Progress Monitoring Scoring Booklet



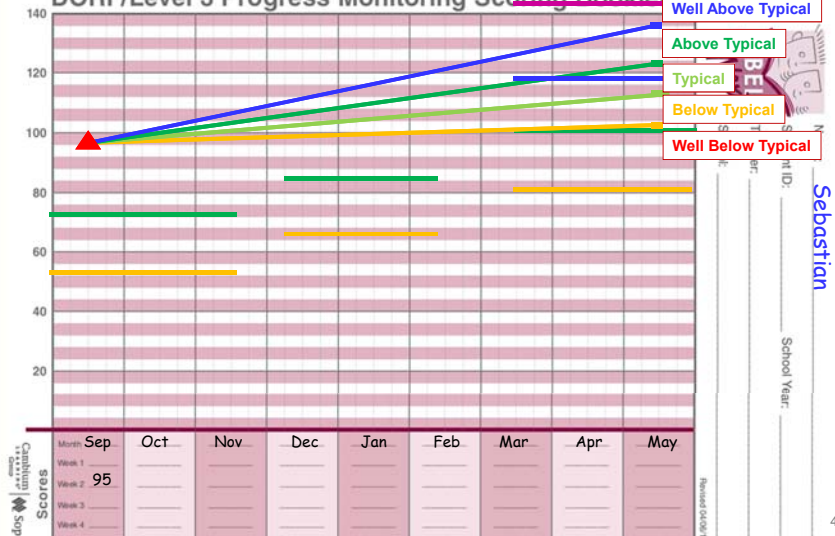
Sebastian with a beginning-of-year composite score of 295 offers a different challenge. The end-of-year benchmark goal may not be ambitious enough.

Name: Sebastian
 Student ID: _____
 Teacher: _____
 School: _____
 School Year: _____

Progress Monitoring

DORF
LEVEL
3

DORF/Level 3 Progress Monitoring Scoring Booklet



Well Above Typical
 Above Typical
 Typical
 Below Typical
 Well Below Typical

Name: Sebastian
 Student ID: _____
 Teacher: _____
 School: _____
 School Year: _____

Limitations

- ▶ These data represent the way DIBELS Next is used in practice.
- ▶ Things we do not know:
 - Assessment fidelity
 - Assessor training
 - Level of instructional support
 - Changes in levels of support
- ▶ Data from two school districts, potentially limiting generalizability.

Thank YOU!

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