



SCHOOL REPORT CARD
TECHNICAL GUIDE
12/2/2012

Document Control

Document Information

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Document History

Version Number	Date	Summary of Change
1	7/12/12	First complete version and included in the Sample Report Card release emailed to districts 9/12 and posted to the Accountability Reform web page the following week.
2	7/25/12	Calculating a Student Achievement Score > Student Achievement Score Worksheet > Mathematics Achievement Worksheet > Step 3, Weight Averages By Year: Corrected weights listed for steps 3(a), (b), and (c). Calculating a Student Achievement Score > Student Achievement Score Worksheet > Step 2(d) of Reading Achievement Worksheet and Mathematics Achievement Worksheet: Clarified when to divide by 3, 2, or 1.
3	8/14/12	Made extensive edits to Student Achievement, Closing Gaps, and On-Track to reflect corrected achievement calculation formula.
4	8/21/12	Student Growth: Background: Clarified that trajectories are usually 3-year growth and 1-year decline projections, and that trajectories are set in the previous year and compared to actual SGPs in the current year.
5	9/12/12	Added a global note about the comparison scores to page 3.
6	12/02/12	• Clarified first description of Test Participation under 'Calculating Student Engagement Indicators Deductions,' emphasizing that the better of one-year or multi-year testing rates is used and that each and every student group must meet the goal. Clarified how score deductions for Test Participation are made. • Edited On-Track Walkthroughs #2 and #3 and the 'On-Track and Postsecondary Readiness Priority Area Worksheet' regarding ACT Participation and Performance to account for the special case where fewer than 20 students participated in ACT. • Added Document Control page. • Numerous minor edits made to make accountability system terminology more consistent across School Report Card related documents. • Updated Sample Report Card under 'Reading the Report Card.' • Edited introduction and background section in 'Building the Overall Accountability Score' for improved clarity. Edited 'Combining Individual Components into a Priority Area Score' under 'Calculating a Score for the On-Track and Postsecondary Readiness Priority Area' for improved clarity. • Edited introduction and Background under 'Calculating a Score for the Student Growth Priority Area' for improved clarity and added 'Closer Look At Target Growth Trajectories.' • Corrected an inconsistency in how weighting affecting On-Track and Postsecondary Readiness components was described. This affected 'Building the Overall Accountability Score: Background'; 'Overall Accountability Score Walkthrough #3'; 'Overall Accountability Score Worksheet' (Step 2); 'Combining Individual Components into a Priority Area Score' under 'Calculating a Score for the On-Track and Postsecondary Readiness Priority Area'; and the Graduation/Attendance Score section of the 'On-Track and Postsecondary Readiness Priority Area Worksheet.' The Worksheet correction only affects schools with no On-Track components other than Graduation/Attendance. • In 'Calculating a Score for the Closing Gaps Priority Area: Reading the Report Card Detail,' added information to the first three bullets about how students are counted in groups, and corrected a misprint in the third bullet, on supergroups.

Calculating School Accountability Scores

This document provides descriptions for calculating the scores comprising Wisconsin’s Accountability Index that are displayed in the School Report Card and the School Report Card Detail:

- Overall Accountability Score
- Priority Area Scores
- Student Engagement Indicator deductions

You can approximate the calculations used to arrive at a school’s Accountability Index scores using data from the School Report Card Detail and this document. However, scores calculated with this document may not exactly match a school’s score due to rounding, both in the calculation itself and in the display of values on the School Report Card Detail.

Table of Contents

Document Information	ii
Document History	ii
Table of Contents	iii
Building the Overall Accountability Score.....	1
Background	1
Global Notes.....	3
Reading the Report Card	3
Overall Accountability Score Walkthrough #1	5
Overall Accountability Score Walkthrough #2	6
Overall Accountability Score Walkthrough #3	7
Overall Accountability Score Worksheet	8
Calculating a Score for the Student Achievement Priority Area	10
Background	10
Reading the Report Card Detail	11
Student Achievement Walkthrough	12
Student Achievement Priority Area Worksheet	15
Calculating a Score for the Student Growth Priority Area	20

Background	20
Reading the Report Card Detail	23
Student Growth Walkthrough	24
Student Growth Priority Area Worksheet	29
Calculating a Score for the Closing Gaps Priority Area	34
Background	34
Reading the Report Card Detail	35
Closing Gaps Walkthrough.....	38
Closing Gaps Priority Area Worksheet	42
Calculating a Score for the On-Track and Postsecondary Readiness Priority Area	48
Background	48
Reading the Report Card Detail	49
On-Track Walkthrough #1.....	51
On-Track Walkthrough #2.....	53
On-Track Walkthrough #3.....	55
On-Track and Postsecondary Readiness Priority Area Worksheet	59
Calculating Student Engagement Indicator Deductions	64
Test Participation	65
Absenteeism	67
Dropout.....	68

Building the Overall Accountability Score

Wisconsin's new school accountability system uses multiple measures across four Priority Areas and expectations of student engagement to build a 0-to-100-point score for each school. This document connects the data on the School Report Card Detail to the school's Overall Accountability Score.

The Overall Accountability Score is derived from the Accountability Index, which includes separate scores for each of four Priority Areas—Student Achievement, Student Growth, Closing Gaps, and On-Track and Postsecondary Readiness—as well as potential deductions for schools missing statewide goals for Student Engagement Indicators. Like the Overall Accountability Score, each of the Priority Areas is scored on a 0-to-100 scale. However, because Wisconsin has schools of many different sizes, grade levels, and student populations, not all of the Priority Areas apply in the same way to every school. Therefore, combining the Priority Area scores to arrive at an overall score is more complicated than taking a straight average of them.

Background

The Wisconsin Department of Public Instruction (DPI) bases the process of building a school's Overall Accountability Score on three important principles:

1. **We cannot calculate every Priority Area score for every school.** For example, Student Growth requires the state to have WKCE test scores for consecutive grades in the same school; because Wisconsin only tests high school students in 10th grade, traditional high schools (grades 9-12) are excluded. Also, every component of the Accountability Index requires there be at least 20 students with data to calculate a score.
2. **A school should not be advantaged or disadvantaged by the presence or lack of a Priority Area or component.** Simply averaging the Priority Areas would create a bias for high schools, which are generally not measured on Student Growth, increasing their scores compared to elementary and middle schools.
3. **The majority of Wisconsin schools have very high rates of attendance and high school graduation, the major determinants of the On-Track and Postsecondary Readiness Priority Area score.** There is very little overall statewide variation in these measures—performance gaps are driven by a “long tail” of few schools with low rates.

We use two solutions to build an overall score that follows these principles:

1. **Student Growth and Closing Gaps scores are aligned with Student Achievement.** Aligning scores to a common scale avoids creating a bias between these Priority Areas.

2. **On-Track and Postsecondary Readiness scores have a fixed weight no matter how many other Priority Area scores are calculated.** Fixing the weight of this Priority Area allows us to account for the narrow overall range of high attendance and graduation rates.

The process for determining a school's Overall Accountability Score consists of calculating a **weighted average Priority Areas score** from the individual Priority Area scores and then subtracting any applicable Student Engagement Indicator deductions. The following method takes into account that scoring for the On-Track and Postsecondary Readiness Priority Area behaves a little differently from scoring for the first three Priority Areas: Some schools will only have a possible maximum score of 80 points, rather than the typical 100 points, for On-Track.

- Begin deriving the weighted average Priority Areas score by taking the average of the Student Achievement, Student Growth, and Closing Gaps scores. The average is the sum of the points earned for those Priority Areas divided by the number of the Priority Areas that apply to the school.
- Next, multiply that average by a factor that is determined by which components of the On-Track and Postsecondary Readiness Priority Area are calculated for the school:
 - If there is *both* an attendance or graduation score *and* scores for other On-Track components, in which case the maximum score for the On-Track Priority Area is 100, then the average is multiplied by 3.
 - If there is *only* an attendance or graduation score, in which case the maximum score for the On-Track Priority Area is 80, then the average is multiplied by 3.2.
- To finish producing the weighted average Priority Areas score, add this multiplied average of the first three Priority Areas to the On-Track and Postsecondary Readiness score, and divide this sum by 4.
- Finally, subtract any Student Engagement Indicator deductions from the weighted average Priority Areas score to arrive at the Overall Accountability Score. The maximum possible total deduction is 20 points for a school that misses all Student Engagement goals.

The Overall Accountability Score determines which Accountability Rating Category a school falls into. DPI plans to align these categories with particular levels of support, as indicated by the following table.

Accountability Rating Category	Accountability Score Range		Level of Support (Future)
	Minimum	Maximum	
Significantly Exceeds Expectations	83	100	Rewards and Replication
Exceeds Expectations	73	82.9	Rewards and Replication
Meets Expectations	63	72.9	Local Improvement Efforts
Meets Few Expectations	53	62.9	State Support
Fails to Meet Expectations	0	52.9	State Support

Global Notes

- The Accountability Index has four Priority Areas and a set of Student Engagement Indicators. Within each area, individual components are calculated. (Example: Student Achievement is a Priority Area; Reading Achievement and Mathematics Achievement are its two components.)
- Measures based upon data from the Wisconsin Student Assessment System (WSAS)—which include Student Achievement, Student Growth, and the achievement components of Closing Gaps and On-Track and Postsecondary Readiness—reflect the NAEP-based reading and mathematics cut scores developed for the Wisconsin Knowledge and Concepts Examination (WKCE). NAEP-based WKCE cut scores have been applied retroactively so that proficiency level data from prior years are directly comparable to the most current year. Proficiency level data for the Wisconsin Alternate Assessment for Students with Disabilities (WAA-SwD) are unchanged.
- All scores are calculated and reported to one-tenth of a point.
- Calculations are rounded to the third decimal point (0.001, or 0.1%). The only exception is Test Participation rates, which are rounded to the nearest whole percentage point. Within the calculation software, rounding is applied in two places: when individual student data are aggregated into a rate or average, and at the end of a sequence of algebraic operations.
- DPI uses a “cell size,” the minimum number of students needed to calculate a data component, of 20 students. In most cases, the cell size is only applied to the current year of data. In the 3rd Grade Reading and 8th Grade Mathematics Achievement components of the On-Track and Postsecondary Readiness Priority Area, the cell size is applied to the two most recent years of data.
- Determination of whether a student attended a school for the Full Academic Year (FAY) is based on FAY for the school, not the district. Students tested in a school’s lowest grade, however, have district FAY status used as a substitute.
- State comparisons are provided on the front page for one of five grade bands (K-5, 6-8, 9-12, K-8, and K-12) that most closely matches the school. Comparison scores treat all Wisconsin students within a particular grade band as if they were one giant school. These scores are calculated using the same methodology as individual school scores. Comparisons are not used to determine a school’s score or rating category.

Reading the Report Card

The Overall Accountability Score, Priority Area scores, and Student Engagement Indicator deductions are shown on the School Report Card and page 1 of the School Report Card Detail. The following sample contains no performance data but shows how the information is laid out.

		High School Sample District School Report Card 2011-12 Summary																																																																																																				
Overall Accountability Score and Rating Exceeds Expectations <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="text-align: left;">Overall Accountability Ratings</th> <th style="text-align: right;">Score</th> </tr> </thead> <tbody> <tr> <td style="background-color: #2e8b57; color: white;">Significantly Exceeds Expectations</td> <td style="text-align: right;">83-100</td> </tr> <tr> <td style="background-color: #90ee90;">Exceeds Expectations</td> <td style="text-align: right;">73-82.9</td> </tr> <tr> <td style="background-color: #d4edda;">Meets Expectations</td> <td style="text-align: right;">63-72.9</td> </tr> <tr> <td style="background-color: #fff3cd;">Meets Few Expectations</td> <td style="text-align: right;">53-62.9</td> </tr> <tr> <td style="background-color: #f8d7da;">Fails to Meet Expectations</td> <td style="text-align: right;">0-52.9</td> </tr> </tbody> </table>		Overall Accountability Ratings	Score	Significantly Exceeds Expectations	83-100	Exceeds Expectations	73-82.9	Meets Expectations	63-72.9	Meets Few Expectations	53-62.9	Fails to Meet Expectations	0-52.9	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Priority Areas</th> <th style="text-align: center;">School Score</th> <th style="text-align: center;">Max Score</th> <th style="text-align: center;">9-12 State</th> <th style="text-align: center;">9-12 Max</th> </tr> </thead> <tbody> <tr> <td>Student Achievement</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Reading Achievement</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Mathematics Achievement</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Student Growth</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Reading Growth</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Mathematics Growth</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Closing Gaps</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Reading Achievement Gaps</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Mathematics Achievement Gaps</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Graduation Rate Gaps</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>On-Track and Postsecondary Readiness</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Graduation Rate (when available)</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>Attendance Rate (when graduation not available)</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>3rd Grade Reading Achievement</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>8th Grade Mathematics Achievement</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> <tr> <td>ACT Participation and Performance</td> <td style="text-align: center;">/</td> <td></td> <td></td> <td style="text-align: center;">/</td> </tr> </tbody> </table>				Priority Areas	School Score	Max Score	9-12 State	9-12 Max	Student Achievement	/			/	Reading Achievement	/			/	Mathematics Achievement	/			/	Student Growth	/			/	Reading Growth	/			/	Mathematics Growth	/			/	Closing Gaps	/			/	Reading Achievement Gaps	/			/	Mathematics Achievement Gaps	/			/	Graduation Rate Gaps	/			/	On-Track and Postsecondary Readiness	/			/	Graduation Rate (when available)	/			/	Attendance Rate (when graduation not available)	/			/	3rd Grade Reading Achievement	/			/	8th Grade Mathematics Achievement	/			/	ACT Participation and Performance	/			/
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Notes: Overall Accountability Score is an average of Priority Area Scores, minus Student Engagement Indicator deductions. The average is weighted differently for schools that cannot be measured with all priority area scores, to ensure that Overall Accountability Score can be compared fairly for all schools. Accountability Ratings do not apply to Priority Area Scores. Details can be found at http://dpi.wi.gov/oea/acct/accountability.html .																																																																																																						

Overall Accountability Score Walkthrough #1

Sample Elementary School has the following Priority Area scores:

<i>Priority Area or Component</i>	<i>Score/Possible</i>
Student Achievement	71.7 / 100
Student Growth	59.0 / 100
Closing Gaps	62.4 / 100
On-Track and Postsecondary Readiness	
Attendance	77.6 / 80
3 rd Grade Reading	15.5 / 20
Student Engagement Indicators	No deductions

Step 1: Combine Student Achievement, Student Growth, and Closing Gaps

$$\text{Average} = \frac{\text{Student Achievement Score} + \text{Student Growth Score} + \text{Closing Gaps Score}}{3}$$

This school has scores calculated for all three of these Priority Areas.

$$\text{Average} \times 3 = \frac{71.7 + 59.0 + 62.4}{3} \times 3 = \mathbf{193.1}$$

Step 2: Combine Result with On-Track and Postsecondary Readiness Scores

Weighted Average Priority Areas Score

$$= \frac{(\text{Average} \times 3) + \text{Attendance Score} + \text{Other On-Track Scores}}{4}$$

$$\text{Weighted Average Priority Areas Score} = \frac{193.1 + 77.6 + 15.5}{4} = \mathbf{71.6}$$

Step 3: Apply Student Engagement Indicator Deductions

Overall Accountability Score = Weighted Average Priority Areas Score – Deductions

$$\text{Overall Accountability Score} = 71.6 - 0 = \mathbf{71.6}$$

Sample Elementary School's Overall Accountability Score is 71.6, putting it into the **Meets Expectations** category.

Overall Accountability Score Walkthrough #2

Example High School has the following Priority Area scores:

<i>Priority Area or Component</i>	<i>Score/Possible</i>
Student Achievement	56.9 / 100
Closing Gaps	70.2 / 100
On-Track and Postsecondary Readiness	
Graduation	68.8 / 80
ACT Participation/Performance	9.6 / 20
Student Engagement Indicators	-5 for Test Participation

It does not have a Student Growth score because there is only one tested grade, 10th, in the school.

Step 1: Combine Student Achievement, Student Growth, and Closing Gaps

$$\text{Average} = \frac{\text{Student Achievement Score} + \text{Closing Gaps Score}}{2}$$

$$\text{Average} \times 3 = \frac{56.9 + 70.2}{2} \times 3 = \mathbf{190.7}$$

Step 2: Combine Result with On-Track and Postsecondary Readiness Scores

Weighted Average Priority Areas Score

$$= \frac{(\text{Average} \times 3) + \text{Graduation Score} + \text{Other On-Track Scores}}{4}$$

$$\text{Weighted Average Priority Areas Score} = \frac{190.7 + 68.8 + 9.6}{4} = \mathbf{67.3}$$

Step 3: Apply Student Engagement Indicator Deductions

Overall Accountability Score = Weighted Average Priority Areas Score – Deductions

$$\text{Overall Accountability Score} = 67.3 - 5 = \mathbf{62.3}$$

Example High School's Overall Accountability Score is 62.3, putting it into the **Meets Few Expectations** category.

Overall Accountability Score Walkthrough #3

Rural Middle School has the following Priority Area scores:

<i>Priority Area or Component</i>	<i>Score/Possible</i>
Student Achievement	86.2 / 100
Student Growth	54.0 / 100
On-Track and Postsecondary Readiness	
Attendance	77.9 / 80
Student Engagement Indicators	No deductions

It does not have a Closing Gaps score because it is too small to have student groups with at least 20 students. It does not have any On-Track and Postsecondary Readiness component scores beyond attendance because it is a grades 4-6 school (and thus has no 3rd grade reading or 8th grade mathematics data).

Step 1: Combine Student Achievement, Student Growth, and Closing Gaps

$$\text{Average} = \frac{\text{Student Achievement Score} + \text{Student Growth Score}}{2}$$

$$\text{Average} \times 3.2 = \frac{86.2 + 54.0}{2} \times 3.2 = \mathbf{224.3}$$

Step 2: Combine Result with On-Track and Postsecondary Readiness Scores

In this case, where the school has only attendance, we have to transform the attendance score from being out of 100 points to being out of 80 points (as for schools with other components of their On-Track and Postsecondary Readiness scores) by multiplying it by 0.8.

$$\text{Weighted Average Priority Areas Score} = \frac{(\text{Average} \times 3.2) + (\text{Attendance Score})}{4}$$

$$\text{Weighted Average Priority Areas Score} = \frac{224.3 + 77.9}{4} = \mathbf{75.6}$$

Step 3: Apply Student Engagement Indicator Deductions

$$\text{Overall Accountability Score} = \text{Weighted Average Priority Areas Score} - \text{Deductions}$$

$$\text{Overall Accountability Score} = 75.6 - 0 = \mathbf{75.6}$$

Rural Middle School's Overall Accountability Score is 75.6, putting it into the **Exceeds Expectations** category.

Overall Accountability Score Worksheet

Introduction

This worksheet requires that you have calculated scores found in the School Report Card Detail for each of the four Priority Areas that apply to your school:

- Student Achievement: score out of 100 points
- Student Growth: score out of 100 points
- Closing Gaps: score out of 100 points
- On-Track and Postsecondary Readiness: score out of 100 points
 - o Attendance or Graduation: Score out of 80 points
 - o 3rd Grade Reading, 8th Grade Mathematics, ACT Participation/Performance: Total out of 20 points

It also requires that you have data on which Student Engagement Indicators deductions, if any, are applied to your school.

Instructions

Work through the worksheet using data you have already calculated for the school. Once you have calculated the Overall Accountability Score, use it to determine the accountability rating. In the future, DPI plans for the level and type of support to align with Rating Categories:

<i>Accountability Rating Category</i>	<i>Accountability Score Range</i>		<i>Level of Support (Future)</i>
	<i>Minimum</i>	<i>Maximum</i>	
Significantly Exceeds Expectations	83	100	Rewards and Replication
Exceeds Expectations	73	82.9	Rewards and Replication
Meets Expectations	63	72.9	Local Improvement Efforts
Meets Few Expectations	53	62.9	State Support
Fails to Meet Expectations	0	52.9	State Support

Worksheet

Step 1: Combine Student Achievement, Student Growth, and Closing Gaps Priority Areas

Leave a box blank if there is no score to enter.

(1a) Enter the Student Achievement score, if applicable

(1b) Enter the Student Growth score, if applicable

(1c) Enter the Closing Gaps score, if applicable

(1d) Add boxes 1a through 1c

(1e) How many boxes in 1a through 1c have scores?

Average: (1f) Divide box 1d by box 1e

Step 2: Combine Result with On-Track and Postsecondary Readiness Priority Area

Leave a box blank if there is no score to enter.

- (2a) Enter the Attendance or Graduation score
(2b) Multiply box 2a by 0.8
(2c) Enter the 3rd Grade Reading score, if applicable
(2d) Enter the 8th Grade Mathematics score, if applicable
(2e) Enter the ACT Participation/Performance score, if applicable
(2f) Add boxes 2b through 2e for On-Track score
(2g) Enter the value from box 1f in Step 1
(2h) If boxes 2c, 2d, and 2e *all* are blank, enter 3.2; else enter 3

2a	
2b	
2c	
2d	
2e	
	2f
2g	
2h	
	2i
	2j
	2k

Weighted average Priority Areas Score: (2k) Divide box 2j by 4

Step 3: Apply Student Engagement Indicator Deductions

- (3a) Enter the Weighted average Priority Areas score from box 2k in Step 2
(3b) What was the school's lowest group participation rate (to the nearest percent)?
(3c) If box 3b is less than 95% but at least 85%, enter -5; if box 3b is less than 85%, enter -10
(3d) Did the school's dropout rate exceed the goal? ☐ Yes ☐ No If "No," enter -5
(3e) Did the school's absenteeism rate exceed the goal? ☐ Yes ☐ No If "No," enter -5

3a
3b
3c
3d
3e
3f

Overall Accountability Score: (3f) Add boxes 3a, 3c, 3d, and 3e

Calculating a Score for the Student Achievement Priority Area

The Student Achievement Priority Area is designed to show **how well the students in a school have learned the knowledge and skills they are supposed to develop**. DPI uses assessment data over the past three years to build a score, with more recent years having more effect on the score. Student Achievement is a points-based measure that gives credit for achievement across multiple levels.

Background

The simplest way to measure student achievement with assessment results, as mandated in the federal No Child Left Behind Act of 2001, is by the percentage of students scoring at or above the proficient level. The definition of “proficient” for the Wisconsin Knowledge and Concepts Examination (WKCE) was originally developed in 1997 through a detailed process involving educators and testing professionals; a similar process was used in 2007 for the Wisconsin Alternate Assessment for Students with Disabilities (WAA-SwD). Wisconsin has achieved high statewide proficiency rates under that definition for many years, but other assessments found different results. For example, the 2010-11 National Assessment of Educational Progress (NAEP) found 47 percent of Wisconsin 4th graders scoring proficient in mathematics, whereas the WKCE and WAA-SwD found 79 percent proficient.

As part of developing this accountability system, DPI is setting college and career readiness benchmarks based on NAEP cut scores, thus moving to higher proficiency standards. We could not make a similar change with the WAA-SwD because that test is constructed differently, but the new Dynamic Learning Maps assessment to be introduced in a few years will reflect these higher expectations.

One of the consequences of this decision is that many students we formerly considered proficient are now scoring at lower achievement levels. To ensure schools are treated fairly, the Student Achievement measure allows students to earn points for their school based on their achievement level:

- Basic level: **0.5 points**
- Proficient level: **1 point**
- Advanced level: **1.5 points**

It also incorporates three years of data to **“smooth out the bumps” in year-to-year results**, weighting the most recent years more heavily.

Reading the Report Card Detail

To arrive at a Student Achievement score, separate scores for reading and mathematics are calculated first and then added together. Tables for reading and mathematics in the student achievement section show the count of students scoring at each performance level over the last three years. Consider the following data on reading achievement for a sample school, which we will use throughout this walkthrough:

Sample Elementary Student Achievement – Reading										
Performance Level	Points Multiplier	2009-10			2010-11			2011-12		
		Students		Points	Students		Points	Students		Points
		Count	Percent		Count	Percent		Count	Percent	
Advanced	1.5	22	16.3%	33	22	17.2%	33	21	16.9%	31.5
Proficient	1	35	25.9%	35	34	26.6%	34	41	33.1%	41
Basic	0.5	37	27.4%	18.5	38	29.7%	19	33	26.6%	16.5
Minimal Performance/ Not Tested	0	41	30.4%	0	34	26.6%	0	29	23.4%	0
Total Enrolled	-	135	100.0%	86.5	128	100.0%	86	124	100.0%	89

This table shows that 135 students were enrolled at this school in 2009-10, with 22 scoring Advanced, 35 scoring Proficient, 37 scoring Basic, and 41 scoring Minimal Performance or not tested. Counts for 2010-11 and 2011-12 are similarly displayed. This table also shows percent of students scoring in each performance category in 2009-10, with 16.3% scoring Advanced, 25.9% scoring Proficient, 27.4% scoring Basic, and 30.4% scoring Minimal Performance or not tested. Percentages for 2010-11 and 2011-12 are similarly displayed. Points and points multipliers for each performance level are also displayed.

Student Achievement Walkthrough

This walkthrough guides the user through determination of a Student Achievement score in a single content area, reading. To determine an overall student achievement score, the process is repeated for the other content area (mathematics in this case) and the two content area scores are added.

Throughout this walkthrough we use three terms to describe the year of data used in each step:

- “Prior Year 2” means the left-most school year shown on the report card. In this example, it refers to 2009-10.
- “Prior Year 1” means the center school year shown on the report card. In this example, it refers to 2010-11.
- “Current Year” means the right-most school year shown on the report card. In this example, it refers to 2011-12.

Step 1: Assign and Average Points

The first step is to assign points for student achievement and take an average for each year. Students scoring Advanced are assigned 1.5 points each; students scoring Proficient, 1 point; and students scoring Basic, 0.5 points. Students scoring Minimal Performance or not tested are assigned zero points. These point values are multiplied by the number of students, added, and divided by the total tested enrollment to determine an average. We cap each year’s average at a maximum of 1.

Performance Level	Points Multiplier	2009-10			2010-11			2011-12		
		Students		Points	Students		Points	Students		Points
		Count	Percent		Count	Percent		Count	Percent	
Advanced	1.5	22	16.3%	33	22	17.2%	33	21	16.9%	31.5
Proficient	1	35	25.9%	35	34	26.6%	34	41	33.1%	41
Basic	0.5	37	27.4%	18.5	38	29.7%	19	33	26.6%	16.5
Minimal Performance/ Not Tested	0	41	30.4%	0	34	26.6%	0	29	23.4%	0
Total Enrolled	-	135	100.0%	86.5	128	100.0%	86	124	100.0%	89

Calculation

$$\text{Prior Year 2 Average} = 86.5/135 = \mathbf{0.641}$$

$$\text{Prior Year 1 Average} = 86/128 = \mathbf{0.672}$$

$$\text{Current Year Average} = 89/124 = \mathbf{0.718}$$

Step 2: Calculate Annual Weights

Next, we calculate a weight for each year’s average which takes into account (1) year-to-year fluctuations in enrollment and (2) that more recent years should count more heavily. To do this, we

calculate a weight that is the product of an “enrollment weight”—the enrollment that year divided by the average enrollment across all three years—and a “year weight” that is higher for more recent years.

The values that go into each year’s weight depend upon how many years of data are available that meet our cell size (minimum number of students with data) of 20:

- Three years available: “Year weights” are 1.5 for the current year, 1.25 for the prior year, and 1 for the year before that; enrollment is averaged across all three years.
- Two years available: “Year weights” are 1.5 for the current year and 1 for the prior year; enrollment is averaged across only the current and prior years.
- One year available: The current year weight is 1.

Formulas

$$\text{Prior Year 2 Weight} = 1 \times \frac{\text{Prior Year 2 Enrollment}}{\text{Average Enrollment}}$$

$$\text{Prior Year 1 Weight} = 1.25 \times \frac{\text{Prior Year 1 Enrollment}}{\text{Average Enrollment}}$$

$$\text{Current Year Weight} = 1.5 \times \frac{\text{Current Year Enrollment}}{\text{Average Enrollment}}$$

Calculation

$$\text{Prior Year 2 Weight} = 1 \times \frac{135}{(135 + 128 + 124)/3} = \mathbf{1.047}$$

$$\text{Prior Year 1 Weight} = 1.25 \times \frac{128}{(135 + 128 + 124)/3} = \mathbf{1.240}$$

$$\text{Current Year Weight} = 1.5 \times \frac{124}{(135 + 128 + 124)/3} = \mathbf{1.442}$$

Step 3: Combine Points and Weights

In step three we multiply the averages determined in step one by the weights calculated in step two.

Formulas

$$\text{Prior Year 2 Score} = \text{Prior Year 2 Average} \times \text{Prior Year 2 Weight}$$

$$\text{Prior Year 1 Score} = \text{Prior Year 1 Average} \times \text{Prior Year 1 Weight}$$

$$\text{Current Year Score} = \text{Current Year Average} \times \text{Current Year Weight}$$

Calculation

$$\text{Prior Year 2 Score} = 0.641 \times 1.047 = \mathbf{0.671}$$

$$\text{Prior Year 1 Score} = 0.672 \times 1.240 = \mathbf{0.833}$$

$$\text{Current Year Score} = 0.718 \times 1.442 = \mathbf{1.035}$$

Step 4: Calculate Content Area Achievement Score

The achievement score for this content area is calculated by adding the scores from step three, dividing the result by the sum of the weights determined in step two, and then multiplying the final value by 50 (creating a content area score out of 50 points).

Formula

$$\begin{aligned} &\text{Content Area Achievement Score} \\ &= \frac{\text{Prior Year 2 Score} + \text{Prior Year 1 Score} + \text{Current Year Score}}{\text{Prior Year 2 Weight} + \text{Prior Year 1 Weight} + \text{Current Year Weight}} \times 50 \end{aligned}$$

Calculation

$$\text{Content Area Achievement Score} = \frac{0.671 + 0.833 + 1.035}{1.047 + 1.240 + 1.442} \times 50 = \mathbf{34.0}$$

This school's achievement score for this content area is 34.0.

Student Achievement Priority Area Worksheet

Introduction

This worksheet has two parts, one for reading and one for mathematics. Both parts require you to copy data from the Student Achievement detail on **page 2** of the School Report Card Detail. Be sure to **use the counts, not the percentages**. **Note that the score calculated here may not exactly match the report card due to rounding**. Here is a key to the data needed to complete the worksheet:

Performance Level	Points Multiplier	2009-10			2010-11			2011-12		
		Students		Points	Students		Points	Students		Points
		Count	Percent		Count	Percent		Count	Percent	
Advanced	1.5	22	16.3%	33	22	17.2%	33	21	16.9%	31.5
Proficient	1	35	25.9%	35	34	26.6%	34	41	33.1%	41
Basic	0.5	37	27.4%	18.5	38	29.7%	19	33	26.6%	16.5
Minimal Performance/ Not Tested	0	41	30.4%	0	34	26.6%	0	29	23.4%	0
Total Enrolled	-	A 135	100.0%	B 86.5	C 128	100.0%	D 86	E 124	100.0%	F 89

Letters shown on the key are used to help identify data on the worksheet. Tables for reading and mathematics achievement have the same layout. Note: In the worksheet, “Prior Year 2” means the left-most year shown (2009-10 in the key), “Prior Year 1” the center year shown (2010-11 in the key), and “Current Year” the right-most year shown (2011-12 in the key).

Instructions

Work through the individual reading and mathematics worksheets step by step, entering data from the school report card where appropriate. When both are complete, add both content area scores to determine the school’s score for the Student Achievement Priority Area:

Reading Achievement Score: _____ out of 50 points

Mathematics Achievement Score: + _____ out of 50 points

Student Achievement Priority Area Score: _____ out of 100 points

Reading Achievement Worksheet

Step 1: Assign and Average Points

If a year does not have data shown, leave that year's boxes blank.

Prior Year 2 Average

(1a) Total points earned (B)

1a

(1b) Count of students (A)

1b

(1c) Is box 1a greater than box 1b?

1c ☐ Yes ☐ No

Average: (1d) If 1c is "Yes," enter 1; if 1c is "No," divide box 1a by box 1b

1d

Prior Year 1 Average

(1e) Total points earned (D)

1e

(1f) Count of students (C)

1f

(1g) Is box 1e greater than box 1f?

1g ☐ Yes ☐ No

Average: (1h) If 1g is "Yes," enter 1; if 1g is "No," divide box 1e by box 1f

1h

Current Year Average

(1i) Total points earned (F)

1i

(1j) Count of students (E)

1j

(1k) Is box 1i greater than box 1j?

1k ☐ Yes ☐ No

Average: (1l) If 1k is "Yes," enter 1; if 1k is "No," divide box 1i by box 1j

1l

Step 2: Calculate Annual Weights

Average Enrollment

(2a) Prior Year 2 count of students (A) – leave blank if not shown

2a

(2b) Prior Year 1 count of students (C) – leave blank if not shown

2b

(2c) Current Year count of students (E)

2c

(2d) Add boxes 2a through 2c

2d

(2e) How many of boxes 2a through 2c have values?

2e

Average enrollment: (2f) Divide box 2d by box 2e

2f

Prior Year 2 Weight

(2g) Is box 2a blank? 2g ☐ Yes ☐ No If "Yes," move on to the "Prior Year 1 Weight" section.

(2h) Enter the count from box 2a

2h

(2i) Enter the average from box 2f

2i

Prior Year 2 Weight: (2j) Divide box 2h by box 2i

2j

Prior Year 1 Weight

(2k) Is box 2b blank? 2k ☐ Yes ☐ No If "Yes," move on to the "Current Year Weight" section.

(2l) Enter the count from box 2b

2l

(2m) Enter the average from box 2f

2m

(2n) Divide box 2l by box 2m

2n

(2o) If 2g is "Yes," enter 1; if 2g is "No," enter 1.25

2o

Prior Year 1 Weight: (2p) Multiply box 2n by box 2o

2p

Current Year Weight

(2q) Are both boxes 2a and 2b blank? 2q ☐ Yes ☐ No If "Yes," skip to box 2t.

(2q) Enter the count from box 2c

(2r) Enter the average from box 2f

(2s) Divide box 2q by box 2r

Current Year Weight: (2t) If 2q is "No," multiply box 2s by 1.5; otherwise, enter 1

2q	
2r	
2s	
2t	

Step 3: Combine Points and Weights

If a year does not have data, leave that year's boxes blank.

Prior Year 2 Score

(3a) Enter the average from box 1d

(3b) Enter the weight from box 2j

Prior Year 2 Score: (3c) Multiply box 3a by box 3b

3a	
3b	
3c	

Prior Year 1 Score

(3d) Enter the average from box 1h

(3e) Enter the weight from box 2p

Prior Year 1 Score: (3f) Multiply box 3d by box 3e

3d	
3e	
3f	

Current Year Score

(3g) Enter the average from box 1l

(3h) Enter the weight from box 2t

Current Score: (3i) Multiply box 3g by box 3h

3g	
3h	
3i	

Step 4: Calculate Reading Achievement Score

(4a) Enter the score from box 3c

(4b) Enter the score from box 3f

(4c) Enter the score from box 3i

(4d) Add boxes 4a through 4c

4a
4b
4c
4d

(4e) Enter the weight from box 2j

(4f) Enter the weight from box 2p

(4g) Enter the weight from box 2t

(4h) Add boxes 4e through 4g

(4i) Divide box 4d by box 4h

Reading Achievement Score: (4j) Multiply box 4i by 50

4e	
4f	
4g	
4h	
4i	
4j	

Mathematics Achievement Worksheet

Step 1: Assign and Average Points

If a year does not have data shown, leave that year's boxes blank.

Prior Year 2 Average

(1a) Total points earned (B)

1a

(1b) Count of students (A)

1b

(1c) Is box 1a greater than box 1b?

1c ☐ Yes ☐ No

Average: (1d) If 1c is "Yes," enter 1; if 1c is "No," divide box 1a by box 1b

1d

Prior Year 1 Average

(1e) Total points earned (D)

1e

(1f) Count of students (C)

1f

(1g) Is box 1e greater than box 1f?

1g ☐ Yes ☐ No

Average: (1h) If 1g is "Yes," enter 1; if 1g is "No," divide box 1e by box 1f

1h

Current Year Average

(1i) Total points earned (F)

1i

(1j) Count of students (E)

1j

(1k) Is box 1i greater than box 1j?

1k ☐ Yes ☐ No

Average: (1l) If 1k is "Yes," enter 1; if 1k is "No," divide box 1i by box 1j

1l

Step 2: Calculate Annual Weights

Average Enrollment

(2a) Prior Year 2 count of students (A) – leave blank if not shown

2a

(2b) Prior Year 1 count of students (C) – leave blank if not shown

2b

(2c) Current Year count of students (E)

2c

(2d) Add boxes 2a through 2c

2d

(2e) How many of boxes 2a through 2c have values?

2e

Average enrollment: (2f) Divide box 2d by box 2e

2f

Prior Year 2 Weight

(2g) Is box 2a blank? 2g ☐ Yes ☐ No If "Yes," move on to the "Prior Year 1 Weight" section.

(2h) Enter the count from box 2a

2h

(2i) Enter the average from box 2f

2i

Prior Year 2 Weight: (2j) Divide box 2h by box 2i

2j

Prior Year 1 Weight

(2k) Is box 2b blank? 2k ☐ Yes ☐ No If "Yes," move on to the "Current Year Weight" section.

(2l) Enter the count from box 2b

2l

(2m) Enter the average from box 2f

2m

(2n) Divide box 2l by box 2m

2n

(2o) If 2g is "Yes," enter 1; if 2g is "No," enter 1.25

2o

Prior Year 1 Weight: (2p) Multiply box 2n by box 2o

2p

Current Year Weight

(2q) Are both boxes 2a and 2b blank? 2q ☐ Yes ☐ No If "Yes," skip to box 2t.

(2q) Enter the count from box 2c

(2r) Enter the average from box 2f

(2s) Divide box 2q by box 2r

Current Year Weight: (2t) If 2q is "No," multiply box 2s by 1.5; otherwise, enter 1

2q	
2r	
2s	
2t	

Step 3: Combine Points and Weights

If a year does not have data, leave that year's boxes blank.

Prior Year 2 Score

(3a) Enter the average from box 1d

(3b) Enter the weight from box 2j

Prior Year 2 Score: (3c) Multiply box 3a by box 3b

3a	
3b	
3c	

Prior Year 1 Score

(3d) Enter the average from box 1h

(3e) Enter the weight from box 2p

Prior Year 1 Score: (3f) Multiply box 3d by box 3e

3d	
3e	
3f	

Current Year Score

(3g) Enter the average from box 1l

(3h) Enter the weight from box 2t

Current Score: (3i) Multiply box 3g by box 3h

3g	
3h	
3i	

Step 4: Calculate Mathematics Achievement Score

(4a) Enter the score from box 3c

(4b) Enter the score from box 3f

(4c) Enter the score from box 3i

(4d) Add boxes 4a through 4c

4a
4b
4c
4d

(4e) Enter the weight from box 2j

(4f) Enter the weight from box 2p

(4g) Enter the weight from box 2t

(4h) Add boxes 4e through 4g

(4i) Divide box 4d by box 4h

Mathematics Achievement Score: (4j) Multiply box 4i by 50

4e	
4f	
4g	
4h	
4i	
4j	

Calculating a Score for the Student Growth Priority Area

The Student Growth Priority Area uses a measurement tool to evaluate schools on **student progress toward higher performance levels** and **student decline below the Proficient level**. This tool allows us to set target growth trajectories for nearly every student in Wisconsin and compare their actual growth to those targets. This measure is designed so that schools can earn the most credit for helping students farthest behind their peers accelerate their growth. At the same time, schools are not penalized for high levels of achievement.

Background

At the foundation of the Student Growth score is a growth measure called **Student Growth Percentiles (SGPs)**. While the mathematics behind SGPs are complex, the concept is fairly straightforward. When we look at one student's WKCE scores over time, we can find many other students with similar scores over time, and we can establish an academic peer group of all these students to help us make comparisons. An SGP is a percentile rank that **compares one student's change in WKCE scores from last year to this year to the growth of the student's peers**. SGPs allow us to describe an individual student's growth across the full range of performance levels, rather than focusing on growth to one specific level. Wisconsin schools already use student level SGP reports that both describe individual students' past growth and project ranges of low, typical, and high growth for students in the next year.

For the Student Growth Priority Area, we employ the same statistic, the SGP, to make a different sort of projection than is shown on our student level SGP reports. For Student Growth, we choose three specific performance targets and use the SGP methodology to project the rate of growth a particular student would have to exhibit to reach each of those targets. The targets in question are straightforward: attaining the threshold scores for the Basic, Proficient, and Advanced WKCE performance levels within a period of three years. These target SGPs, or target growth trajectories, provide us with benchmarks against which we can compare a student's actual growth.

Setting target trajectories is possible because we have a large body of historical, student level, test score data. For any individual student, we can pull out of this body of data just the data for a peer group of students with similar test score histories up to the current grade of the student in question. Many of these peers drawn from our historical data set also have test scores for grades that our current student has yet to get to, and it is these data that allow us to project the rates of growth our student will need in order to reach different performance levels within the given three year measurement period. These rates of growth are our target SGPs or target growth trajectories. The box titled "A Closer Look At Target Growth Trajectories" provides a more specific illustration of how target growth trajectories are derived and used.

Specifically, we calculate, for every student with growth data, target growth trajectories for the Basic, Proficient, and Advanced levels, based on the student's score in the previous year. For a performance

level above a student's current level, the target trajectory is the most lenient SGP—i.e., slowest pace of improvement—out of the SGPs associated with improving to that level in one, two, and three years' time. (Usually, but not always, the most lenient SGP will be the one related to the student taking a full three years to grow to the higher level.) For a performance level below a student's current level, it is the most lenient SGP—i.e., most rapid decline— out of the SGPs associated with declining to that level in one, two, and three years' time. (Usually, the most lenient SGP will be one the related to the student declining to the lower level after just one year.)

In the current year, we compare each student's actual SGPs against the student's target SGPs. If, for example, a student who was below the Proficient level produces an SGP that exceeds his target SGP for the Proficient level, then we can say that this student is on a trajectory to reach the Proficient level—even if the change in levels hasn't happened yet. Using a "value table," we assign positive points if the student's actual SGP equals or exceeds his target SGPs for higher levels and negative points if the student was above the Proficient level but has an actual SGP that falls below his target SGP for the Proficient level. Points earned by all a school's students are accumulated to calculate that school's Student Growth score.

Because of the fall-to-fall testing cycle, for this Priority Area a school's students are those that it enrolled in the prior year. However, a student's Full Academic Year (FAY) status is determined in the current year.

A Closer Look At Target Growth Trajectories

Consider a sixth-grade student who last year, as a fifth grader, was rated Proficient in Reading, with a score of 515. (This illustration uses the NAEP-based WKCE performance levels.) Let us focus on the target of attaining the Advanced performance level within three years of that fifth-grade starting point. To reach the Advanced level in Reading as a sixth grader, our student would need to score 573. To reach Advanced as a seventh grader, she would need a 590, and to reach it as an eighth grader, she would need a 613. Once we have the student's sixth-grade test results, it will be obvious whether or not she reached the target in the first year of the three year window. But by using the SGP to establish target growth trajectories, we will also be able to tell whether or not she is on a growth path to meeting the target by the second year or the third year.

To derive the target trajectory, we draw upon our body of historical data to identify a peer group for our student comprised of students older than she who have already progressed ahead of her through the sixth, seventh, and eighth grades *but who had the same or similar track record of Reading scores from the third through the fifth grade* as she has. Using the sixth-grade through eighth-grade test data for this population of older peers, we can identify three specific SGPs: the SGP for a member of this peer group who just made it to the threshold of the Advanced level as a sixth grader, the SGP for a member who made it as a seventh grader, and the SGP for one who made it as an eighth grader. The most lenient (lowest) of these becomes our student's target SGP or growth trajectory for the Advanced level. (For intuitively apparent reasons, the SGP associated with meeting a higher target in the third year will usually be the most lenient, as is true for this example; however, depending on a student's situation, infrequently the first or second year projected SGP may be the most lenient.)

When we receive our student's sixth-grade Reading score, we can calculate her individual SGP characterizing her fifth-grade-to-sixth-grade growth in the context of all current sixth graders. Now, we can compare her actual SGP with her target SGP. If it meets or surpasses the target, we can say that this student is on a trajectory to improve to the Advanced level.

For a different student who was at the Basic level in Reading in fifth grade, we would follow the same procedure to determine a target trajectory for the Proficient level as well as Advanced, and for another student who started at the Minimal level in fifth grade, we would also determine a target for the Basic level.

So far we have talked about growth trajectories to higher levels. But for the Student Growth Priority Area, being on a path to drop below the Proficient level also matters. Therefore, for our student, the other important target to determine besides the target growth trajectory to Advanced is the decline trajectory to scoring below the threshold for Proficient, which is 525 for sixth graders, 535 for seventh graders, and 548 for eighth graders. The most lenient of the SGPs relating to our student's next three years becomes her target decline trajectory. (In this case, as will be the case for most decline trajectories, decline below the target in one year's time yields the most lenient SGP.)

Reading the Report Card Detail

To arrive at a Student Growth score, separate scores for reading and mathematics are calculated first and then added together. The four-by-four grids for reading and mathematics shown in the Student Growth detail summarize the comparisons of actual SGPs to target trajectories for all students in a school. Consider the following data on reading growth for a sample school, which we will use throughout the walkthrough:

Sample Elementary – Reading Growth					
Reading Growth Score is based on the students tested in fall 2010 with data for growth to fall 2011.					
Starting Level		Growth/Decline Trajectory			
		Min. Perf.	Basic	Proficient	Advanced
Minimal Performance	33	10	16	6	1
	19.2%	5.8%	9.3%	3.5%	0.6%
Basic	66	6	46	11	3
	38.4%	3.5%	26.7%	6.4%	1.7%
Proficient	60	1	16	34	9
	34.9%	0.6%	9.3%	19.8%	5.2%
Advanced	13	0	0	7	6
	7.6%	0.0%	0.0%	4.1%	3.5%

On the left, under “Starting Level,” students at Sample Elementary School (with WKCE growth data from fall 2010 to fall 2011 to calculate SGPs and target trajectories over the next three years) are grouped by their fall 2010 performance levels. To the right, they are grouped further based on whether or not their actual growth met the target trajectory for a particular level (or under Minimal Performance, whether they fell below the Basic trajectory).

Example (shown with the bold border): 66 students started at the Basic level in fall 2010. Of those, 11 met the Proficient target trajectory but not the Advanced target trajectory.

The layout of the table reflects how these comparisons are used to calculate a school’s Student Growth score. The green/bold highlighted cells show students whose actual growth put them on a trajectory toward a higher performance level, and the red/italic highlighted cells show those whose actual decline put them on a trajectory to fall below Proficient.

Student Growth Walkthrough

This walkthrough guides the user through determination of a Student Growth score in a single content area, reading, for Sample Elementary School. To determine the Student Growth Priority Area score, the process is repeated for mathematics, and the two content area scores are added.

Step 1: Assign Growth and Decline Points

The first step is to assign points for each student's comparison of actual SGP to target trajectories. We use two basic principles to assign points:

1. Students earn +1 point for each higher level they are on a trajectory toward attaining.
2. Students earn -1 point if they are on a trajectory to decline below Proficient.

These principles can be combined to create a value table showing how many points a student can earn for each combination of starting level and target trajectory met:

Starting Level	Growth/Decline Trajectory			
	Min. Perf.	Basic	Proficient	Advanced
Min Perf	0	+1	+2	+3
Basic	0	0	+1	+2
Proficient	-1	-1	0	+1
Advanced	-1	-1	0	0

By applying the value table to our sample school's report card data, we can figure out how many points students earned:

Starting Level		Growth/Decline Trajectory			
		Min. Perf.	Basic	Proficient	Advanced
Minimal Performance	33 students	10 students	16 students	6 students	1 student
		0 points	+16 points	+12 points	+3 points
Basic	66 students	6 students	46 students	11 students	3 students
		0 points	0 points	+11 points	+6 points
Proficient	60 students	1 student	16 students	34 students	9 students
		-1 point	-16 points	0 points	+9 points
Advanced	13 students	0 students	0 students	7 students	6 students
		0 points	0 points	0 points	0 points

Total Growth Points: +57 points	Total Decline Points: -17 points
---------------------------------	----------------------------------

Step 2: Calculate Growth and Decline Factors

One thing to note about step 1 is that because of the way we look at student growth, certain students cannot earn points—Advanced students cannot earn positive growth points since they have no trajectory to a higher performance level, and Minimal Performance or Basic students cannot earn negative decline points since they are already below Proficient. We incorporate Advanced students into growth and Minimal Performance or Basic students into decline by calculating **growth and decline factors**, values that represent the average numbers of points earned by students who can earn points, scaled by the percentages of students who cannot.

Definitions

Note: Within definitions, a performance level (Minimal Performance, Basic, Proficient, or Advanced) refers to the *starting level* in the growth detail table, not the trajectory.

$$\text{Average Growth Points} = \frac{\text{Total Growth Points}}{\text{Number Min. Perf.} + \text{Number Basic} + \text{Number Proficient}}$$

$$\text{Percent Advanced} = \frac{\text{Number Advanced}}{\text{Total Students with Growth Data}}$$

$$\text{Average Decline Points} = \frac{\text{Total Decline Points}}{\text{Number Proficient} + \text{Number Advanced}}$$

$$\text{Percent Min. Perf. or Basic} = \frac{\text{Number Min. Perf.} + \text{Number Basic}}{\text{Total Students with Growth Data}}$$

Formulas

$$\begin{aligned} \text{Growth Factor} &= \text{Average Growth Points} + \text{Percent Advanced} \\ &\quad - (\text{Average Growth Points} \times \text{Percent Advanced}) \end{aligned}$$

$$\begin{aligned} \text{Decline Factor} &= \text{Average Decline Points} \\ &\quad - (\text{Average Decline Points} \times \text{Percent Min. Perf. or Basic}) \end{aligned}$$

Note: The formulas are set up this way so that a school with all Advanced students receives full credit for growth (Growth Factor = 1) and a school with all Minimal Performance or Basic students receives no penalty for decline (Decline Factor = 0).

Calculation

$$\text{Average Growth Points} = \frac{+57 \text{ points}}{33 \text{ Min. Perf. students} + 66 \text{ Basic students} + 60 \text{ Proficient students}} = 0.358$$

$$\text{Percent Advanced} = \frac{13 \text{ Advanced students}}{172 \text{ total students}} = 0.076$$

$$\text{Growth Factor} = 0.358 + 0.076 - (0.358 \times 0.076) = \mathbf{0.407}$$

$$\text{Average Decline Points} = \frac{-17 \text{ points}}{60 \text{ Proficient students} + 13 \text{ Advanced students}} = -0.233$$

$$\text{Percent Min. Perf. or Basic} = \frac{33 \text{ Min. Perf. students} + 66 \text{ Basic students}}{172 \text{ total students}} = 0.576$$

$$\text{Decline Factor} = -0.233 - (-0.233 \times 0.576) = \mathbf{-0.099}$$

Step 3: Combine Growth and Decline Factors into Total Factor

Once the growth and decline factors have been calculated, they are combined into a single value, the **total factor**. The basic formula for the total factor is:

$$\text{Total Factor} = \text{Growth Factor} + \text{Decline Factor} + 0.5$$

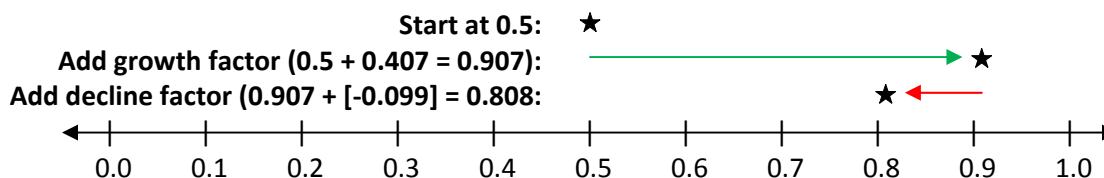
Why add the growth and decline factors to 0.5? The reason is to create a value like a rate that we can use to determine a score. This makes more sense if we illustrate the calculation for our sample school:

$$\text{Total Factor} = 0.407 + (-0.099) + 0.5 = \mathbf{0.808}$$

The total factor formula puts the school on a range between zero and one. A total factor of 0.5 represents a school where student growth and decline are balanced. As the total factor moves away from 0.5 it shows that either growth or decline is more predominant:



We can show the total factor calculation on this number line:



A total factor of 0.808 shows that our sample school has quite a bit more growth than decline.

The basic equation above can give a value for the total factor of less than zero or greater than one. Therefore, we add two conditions that restrict the final value to a zero-to-one range:

If $\text{Growth Factor} + \text{Decline Factor} + 0.5 < 0$, then $\text{Total Factor} = 0$

If $\text{Growth Factor} + \text{Decline Factor} + 0.5 > 1$, then $\text{Total Factor} = 1$

Otherwise, $\text{Total Factor} = \text{Growth Factor} + \text{Decline Factor} + 0.5$

Step 4: Calculate a 75% Confidence Interval

As with any measure, there is some statistical uncertainty in the calculation of a Student Growth score. One way to address this uncertainty is to calculate a **confidence interval**, a value that expresses how the number of students in our measure creates uncertainty—fewer students leads to more uncertainty. Calculating a confidence interval can be tricky because it does not work well with values close to zero or one, or for very small numbers of students. Using a confidence interval is a necessary statistical safeguard, but it adds a layer of complexity to the calculation.

N and P

A rule of thumb for confidence intervals is that the product of N (the number of items in a sample—in this case, the number of students) and P (the percentage or rate calculated) should be at least 5, and the product of N and $(1 - P)$ should also be at least 5. When either of these products is less than 5 we substitute a new value of P that meets the rule of thumb.

Example 1: $N = 20$; $P = 0.6$. $N \times P = 20 \times 0.6 = \mathbf{12}$; $N \times (1 - P) = 20 \times 0.4 = \mathbf{8}$.
We're OK!

Example 2: $N = 20$; $P = 0.1$. $N \times P = 20 \times 0.1 = \mathbf{2}$; $N \times (1 - P) = 20 \times 0.9 = \mathbf{18}$.
Fails the $N \times P$ test! Solution: $P_{New} = 5/N = 5/20 = \mathbf{0.25}$.

Example 3: $N = 20$; $P = 0.8$. $N \times P = 20 \times 0.8 = \mathbf{16}$; $N \times (1 - P) = 20 \times 0.2 = \mathbf{4}$.
Fails the $N \times (1 - P)$ test! Solution: $P_{New} = 1 - (5/N) = 1 - (5/20) = \mathbf{0.75}$.

Definitions

N = Total number of students with growth data

TF = Total Factor determined in previous step

Total Factor-CI = Total Factor used in confidence interval calculation:

If $N \times TF \geq 5$ and $N \times (1 - TF) \geq 5$, then Total Factor-CI = TF

If $N \times TF < 5$, then Total Factor-CI = $5/N$

If $N \times (1 - TF) < 5$, then Total Factor-CI = $1 - (5/N)$

Formula

$$\text{Confidence Interval} = 1.15 \times \sqrt{\frac{\text{Total Factor-CI} \times (1 - \text{Total Factor-CI})}{\text{Total number of students with growth data}}}$$

Calculation

$$N = 172; TF = 0.808$$

$$N \times TF = 172 \times 0.808 = 139; N \times (1 - TF) = 172 \times 0.192 = 33$$

Passes both tests, so Total Factor-CI = $TF = 0.808$

$$\text{Confidence Interval} = 1.15 \times \sqrt{\frac{0.808 \times 0.192}{172}} = \mathbf{0.035}$$

Note: A confidence interval is a value that is added or subtracted to create a range. In this example, the confidence interval means we are reasonably confident that the true growth score for these 172 students falls within a range from 0.773 to 0.843 (0.808 ± 0.035). As we will see in the next step, the top of this range—the maximum value we can reliably determine for the school—is used to determine the growth score.

Step 5: Determine the Content Area Student Growth Score

Now that we have the total factor and the 75 percent confidence interval, we can determine this school's Student Growth score in reading. The formula is complex in order to put Student Growth scores on a similar scale as Student Achievement. Like the WKCE, the new school accountability system includes different kinds of data and different scores that carry different meanings; it is necessary to align components like Student Growth to a common scale.

Formula

$$\begin{aligned} &\text{Content Area Student Growth Score} \\ &= [(\text{Total Factor} + \text{Confidence Interval}) \times 1.01] - 0.16 \times 50 \end{aligned}$$

Note: Adding the confidence interval to the total factor gives the highest reasonable value for growth within the 75 percent confidence interval. 1.01 and 0.16 are numbers that align Student Growth to the common scale based on Student Achievement scores. 50 sets the content area growth score out of 50 points.

Calculation

$$\text{Content Area Student Growth Score} = [(0.808 + 0.035) \times 1.01] - 0.16 \times 50 = \mathbf{34.6}$$

Sample Elementary School's Student Growth score in reading is 34.6.

Student Growth Priority Area Worksheet

Introduction

This worksheet has two parts, one for reading and one for mathematics. Both parts require you to copy data from the Student Growth detail of the School Report Card Detail. Be sure to **use the counts, not the percentages**. Note that the score calculated here may not exactly match the report card due to **rounding**. Here is a key to the data needed to complete the worksheet:

Sample Elementary – Reading Growth

Reading Growth Score is based on the students tested in fall 2010
with data for growth to fall 2011.

Starting Level		Growth/Decline Trajectory			
		Min. Perf.	Basic	Proficient	Advanced
Minimal Performance	B 33	10	F 16	G 6	H 1
	19.2%	5.8%	9.3%	3.5%	0.6%
Basic	C 66	6	46	I 11	J 3
	38.4%	3.5%	26.7%	6.4%	1.7%
Proficient	D 60	L 1	M 16	34	K 9
	34.9%	0.6%	9.3%	19.8%	5.2%
Advanced	E 13	N 0	O 0	7	6
	7.6%	0.0%	0.0%	4.1%	3.5%

Letters shown on the key are used to help identify data on the worksheet. Note: Although the key shows an example for reading growth, the same components are used for mathematics growth as well.

Instructions

Work through the individual reading and mathematics worksheets step by step, entering data from the School Report Card Detail where appropriate. When both are complete, add both content area scores to determine the school's Student Growth Priority Area score:

Reading Student Growth Score: _____ out of 50 points

Mathematics Student Growth Score: + _____ out of 50 points

Student Growth Priority Area Score: _____ out of 100 points

Reading Student Growth Score

Step 1: Assign Growth and Decline Points

Growth Points

(1a) Min. Perf. toward Advanced students (H)		$\times 3 =$		1a
(1b) Min. Perf. toward Proficient students (G)		$\times 2 =$		1b
(1c) Basic toward Advanced students (J)		$\times 2 =$		1c
(1d) Min. Perf. toward Basic students (F)		$\times 1 =$		1d
(1e) Basic toward Proficient students (I)		$\times 1 =$		1e
(1f) Proficient toward Advanced students (K)		$\times 1 =$		1f
Total Growth Points: (1g) Add boxes 1a through 1f				

Decline Points

(1h) Proficient toward Min. Perf. students (L)		$\times -1 =$		1h
(1i) Proficient toward Basic students (M)		$\times -1 =$		1i
(1j) Advanced toward Min. Perf. students (N)		$\times -1 =$		1j
(1k) Advanced toward Basic students (O)		$\times -1 =$		1k
Total Decline Points: (1l) Add boxes 1h through 1k (will be a negative number)				

Step 2: Calculate Growth and Decline Factors

Total Students with Growth Data

(2a) Number of Min. Perf. students (B)		2a
(2b) Number of Basic students (C)		2b
(2c) Number of Proficient students (D)		2c
(2d) Number of Advanced students (E)		2d
Total students: (2e) Add boxes 2a through 2d		

Growth Factor

(2f) Number of Min. Perf. students (B)		2f
(2g) Number of Basic students (C)		2g
(2h) Number of Proficient students (D)		2h
(2i) Enter Total Growth Points from box 1g		
(2j) Add boxes 2f through 2h		
Average Growth Points: (2k) Box 2i $\div$ box 2j		
(2g) Number of Advanced students (E)		2l
(2h) Enter total students with growth data from box 2e		2m
Percent Advanced: (2n) Box 2l $\div$ box 2m		
Growth Factor: (2o) Box 2k + box 2n - (box 2k $\times$ box 2n)		

Decline Factor

(2p) Number of Proficient students (D)		2p
(2q) Number of Advanced students (E)		2q
(2r) Enter Total Decline Points from box 1l		
(2s) Add boxes 2p and 2q		
Average Decline Points: (2t) Box 2r $\div$ box 2s (will be a negative number)		
(2u) Number of Min. Perf. students (B)		2u

(2v) Number of Basic students (C)	2v	
(2w) Add boxes 2u and 2v	2w	
(2x) Enter total students with growth data from box 2e	2x	
Percent Min. Perf. or Basic: (2y) Box 2w ÷ box 2x	2y	
Decline Factor: (2z) Box 2t – (box 2t × box 2y) (will be a negative number)	2z	

Step 3: Combine Growth and Decline Factors into Total Factor

(3a) Enter Growth Factor from box 2o	3a	
(3b) Enter Decline Factor from box 2z	3b	
(3c) Box 3a + box 3b + 0.5	3c	
(3d) Is box 3c less than zero?	3d	☐ Yes ☐ No
(3e) If 3d is 'Yes,' enter 0	3e	
(3f) Is box 3c greater than one?	3f	☐ Yes ☐ No
(3g) If box 3f is 'Yes,' enter 1	3g	
(3h) If boxes 3d and 3f are 'No,' enter box 3c	3h	
Total Factor: (3i) Enter whichever one of boxes 3e, 3g, or 3h contains a value	3i	

Step 4: Calculate a 75% Confidence Interval

(4a) Total students with growth data (A)	4a	
(4b) Enter Total Factor from box 3i	4b	
(4c) Multiply box 4a by box 4b	4c	
(4d) Enter 5 ÷ box 4a	4d	
(4e) Is box 4c less than 5?	4e	☐ Yes ☐ No
(4f) If 4e is 'Yes,' enter box 4d	4f	
(4g) Enter 1 minus box 4b	4g	
(4h) Multiply box 4a by box 4g	4h	
(4i) Is box 4h less than 5?	4i	☐ Yes ☐ No
(4j) If 4i is 'Yes,' enter (1 – box 4d)	4j	
(4k) If both 4e and 4i are 'No,' enter Total Factor from box 4b	4k	
(4l) Enter whichever one of boxes 4f, 4j, or 4k contains a value	4l	
(4m) Enter 1 minus box 4l	4m	
(4n) Multiply box 4l by box 4m	4n	
(4o) Divide box 4n by box 4a	4o	
(4p) Take the square root of box 4o	4p	
Confidence Interval: (4q) Multiply box 4p by 1.15	4q	

Step 5: Determine the Reading Growth Score

(5a) Enter the Total Factor from box 3i	5a	
(5b) Enter the Confidence Interval from box 4q	5b	
(5c) Add boxes 5a and 5b	5c	
(5d) Multiply box 5c by 1.01	5d	
(5e) Enter box 5d minus 0.16	5e	
Reading Student Growth Score: (5f) Multiply box 5e by 50	5f	

Mathematics Growth Score

Step 1: Assign Growth and Decline Points

Growth Points

(1a) Min. Perf. toward Advanced students (H)		$\times 3 =$	1a	
(1b) Min. Perf. toward Proficient students (G)		$\times 2 =$	1b	
(1c) Basic toward Advanced students (J)		$\times 2 =$	1c	
(1d) Min. Perf. toward Basic students (F)		$\times 1 =$	1d	
(1e) Basic toward Proficient students (I)		$\times 1 =$	1e	
(1f) Proficient toward Advanced students (K)		$\times 1 =$	1f	
Total Growth Points: (1g) Add boxes 1a through 1f				1g

Decline Points

(1h) Proficient toward Min. Perf. students (L)		$\times -1 =$	1h	
(1i) Proficient toward Basic students (M)		$\times -1 =$	1i	
(1j) Advanced toward Min. Perf. students (N)		$\times -1 =$	1j	
(1k) Advanced toward Basic students (O)		$\times -1 =$	1k	
Total Decline Points: (1l) Add boxes 1h through 1k (will be a negative number)				1l

Step 2: Calculate Growth and Decline Factors

Total Students with Growth Data

(2a) Number of Min. Perf. students (B)	2a	
(2b) Number of Basic students (C)	2b	
(2c) Number of Proficient students (D)	2c	
(2d) Number of Advanced students (E)	2d	
Total students: (2e) Add boxes 2a through 2d		2e

Growth Factor

(2f) Number of Min. Perf. students (B)	2f	
(2g) Number of Basic students (C)	2g	
(2h) Number of Proficient students (D)	2h	
(2i) Enter Total Growth Points from box 1g		2i
(2j) Add boxes 2f through 2h		2j
Average Growth Points: (2k) Box 2i $\div$ box 2j		2k
(2g) Number of Advanced students (E)	2l	
(2h) Enter total students with growth data from box 2e	2m	
Percent Advanced: (2n) Box 2l $\div$ box 2m		2n
Growth Factor: (2o) Box 2k + box 2n - (box 2k $\times$ box 2n)		2o

Decline Factor

(2p) Number of Proficient students (D)	2p	
(2q) Number of Advanced students (E)	2q	
(2r) Enter Total Decline Points from box 1l		2r
(2s) Add boxes 2p and 2q		2s
Average Decline Points: (2t) Box 2r $\div$ box 2s (will be a negative number)		2t
(2u) Number of Min. Perf. students (B)	2u	

(2v) Number of Basic students (C)

2v

(2w) Add boxes 2u and 2v

2w

(2x) Enter total students with growth data from box 2e

2x

Percent Min. Perf. or Basic: (2y) Box 2w ÷ box 2x

2y

Decline Factor: (2z) Box 2t – (box 2t × box 2y) (will be a negative number)

2z

Step 3: Combine Growth and Decline Factors into Total Factor

(3a) Enter Growth Factor from box 2o

3a

(3b) Enter Decline Factor from box 2z

3b

(3c) Box 3a + box 3b + 0.5

3c

(3d) Is box 3c less than zero?

3d ☐ Yes ☐ No

(3e) If 3d is 'Yes,' enter 0

3e

(3f) Is box 3c greater than one?

3f ☐ Yes ☐ No

(3g) If box 3f is 'Yes,' enter 1

3g

(3h) If boxes 3d and 3f are 'No,' enter box 3c

3h

Total Factor: (3i) Enter whichever one of boxes 3e, 3g, or 3h contains a value

3i

Step 4: Calculate a 75% Confidence Interval

(4a) Total students with growth data (A)

4a

(4b) Enter Total Factor from box 3i

4b

(4c) Multiply box 4a by box 4b

4c

(4d) Enter 5 ÷ box 4a

4d

(4e) Is box 4c less than 5?

4e ☐ Yes ☐ No

(4f) If 4e is 'Yes,' enter box 4d

4f

(4g) Enter 1 minus box 4b

4g

(4h) Multiply box 4a by box 4g

4h

(4i) Is box 4h less than 5?

4i ☐ Yes ☐ No

(4j) If 4i is 'Yes,' enter (1 – box 4d)

4j

(4k) If both 4e and 4i are 'No,' enter Total Factor from box 4b

4k

(4l) Enter whichever one of boxes 4f, 4j, or 4k contains a value

4l

(4m) Enter 1 minus box 4l

4m

(4n) Multiply box 4l by box 4m

4n

(4o) Divide box 4n by box 4a

4o

(4p) Take the square root of box 4o

4p

Confidence Interval: (4q) Multiply box 4p by 1.15

4q

Step 5: Determine the Mathematics Student Growth Score

(5a) Enter the Total Factor from box 3i

5a

(5b) Enter the Confidence Interval from box 4q

5b

(5c) Add boxes 5a and 5b

5c

(5d) Multiply box 5c by 1.01

5d

(5e) Enter box 5d minus 0.16

5e

Mathematics Student Growth Score: (5f) Multiply box 5e by 50

5f

Calculating a Score for the Closing Gaps Priority Area

The Closing Gaps Priority Area evaluates schools based on the **change in student achievement and graduation from one year to the next among key student groups**. It focuses on the groups that experience statewide achievement gaps, rewarding schools for improving their performance and penalizing them for reducing the performance of comparison groups.

Background

Wisconsin has a number of specific and significant gaps in reading and mathematics achievement and high school graduation. The Closing Gaps Priority Area is designed to **look at improvement among particular student groups** in a way that **rewards schools for contributing toward closing our achievement gaps**. We evaluate schools' progress in closing achievement gaps using the same measure as in the Student Achievement Priority Area, and in closing graduation gaps using the high school cohort graduation rate. Each "gaps" group is contrasted with a comparison group, but **the performance of the comparison group only becomes a factor—as a penalty—when its performance declines**. The student "gaps" groups and comparison groups that are included in Closing Gaps scores are:

"Gaps" Group	Comparison Group
American Indian	White not Hispanic
Asian	White not Hispanic
Black not Hispanic	White not Hispanic
Hispanic	White not Hispanic
Students with disabilities	Students without disabilities
Economically disadvantaged	Not economically disadvantaged
Limited English proficient	English proficient
Supergroup*	Not in supergroup*

We do not evaluate how the size of each gap changes over time, because that would not allow us to focus on improvement among these particular student groups. (We do report five year change in gaps in the School Report Card for all of the above groups, except the supergroup.) If we simply looked at whether gaps were closing, a school with declining comparison groups would get as good a score as a school with improving "gaps" groups.

* A **"supergroup"** is a **group of students belonging to one or more of the binary groups** (students with disabilities, economically disadvantaged, or limited English proficient). We use a supergroup only when individual groups do not have enough students to be considered in a school's Closing Gaps score, but when combined into the supergroup, they do. For example, in a school with 14 students with disabilities and 16 economically disadvantaged students, there are too few students in either group to be considered in Closing Gaps. However, if there are 25 students in the "students with disabilities/economically disadvantaged" supergroup (9 with disabilities, 11 economically disadvantaged, and 5 in both groups) then we can consider all of those students together in the supergroup.

Reading the Report Card Detail

All of the Closing Gaps measures are based on comparisons between specific groups of students and their peers in a comparison group:

- For racial/ethnic groups we compare each of American Indian, Asian, Black (not Hispanic), and Hispanic students to White (not Hispanic) students. (For report card purposes, a student may only be counted in a single racial/ethnic group.)
- For binary groups (those where a student either is or is not a member: students with disabilities, economically disadvantaged students, and limited English proficient students) we compare the students within the group to those outside it. (A student may be counted in more than one group.)
- For supergroups (groups combining two or three binary groups, used only when those individual groups do not have enough students for comparison but the supergroup does) we compare the students within the supergroup to those outside it. (A student belonging to more than one of the combined groups is only counted once in the supergroup.)

In every case, **both the group and the comparison group need to have enough students to make a comparison**. DPI uses 20 throughout the Wisconsin school accountability system as the minimum number required. Asterisks show that there are not enough students for a particular comparison.

The Closing Gaps data in the School Report Card Detail includes summary tables for Closing Achievement Gaps (one for reading and one for mathematics) and Closing Graduation Gaps. The layout of all three tables is the same, but the data are slightly different. Consider the following table showing Sample Elementary's performance in closing mathematics achievement gaps:

**Sample Elementary
Closing Achievement Gaps – Mathematics | Score 39.4/50**

Group						Comparison Group						Gap	
	2010-11		2011-12		Change		2010-11		2011-12		Change	Prior Year	Current Year
	3-Yr Average Students	Achievement Points	3-Yr Average Students	Achievement Points			3-Yr Average Students	Achievement Points	3-Yr Average Students	Achievement Points			
American Indian or Alaskan Native	*	*	*	*	*	White not Hispanic	*	*	*	*	*	*	*
Asian or Pacific Islander	28	13.5	30	17.3	3.8	White not Hispanic	107	34.3	112	35.8	1.4	20.8	18.4
Black not Hispanic	*	*	*	*	*	White not Hispanic	*	*	*	*	*	*	*
Hispanic	*	*	*	*	*	White not Hispanic	*	*	*	*	*	*	*
Students with Disabilities	41	20.8	40	21.8	1	Students without Disabilities	115	33.4	124	34.5	1.1	12.6	12.7
Economically Disadvantaged	64	23.4	71	25.1	1.7	Not Economically Disadvantaged	91	34.8	93	36.4	1.6	11.4	11.3
Limited English Proficient	*	*	*	*	*	English Proficient	*	*	*	*	*	*	*
"All 3" Supergroup	*	*	*	*	*	Not in "All 3" Supergroup	*	*	*	*	*	*	*
"SwD-ECD" Supergroup	*	*	*	*	*	Not in "SwD-ECD" Supergroup	*	*	*	*	*	*	*
"SwD-LEP" Supergroup	*	*	*	*	*	Not in "SwD-LEP" Supergroup	*	*	*	*	*	*	*
"ECD-LEP" Supergroup	*	*	*	*	*	Not in "ECD-LEP" Supergroup	*	*	*	*	*	*	*

The table includes five columns each for every group and comparison group. Columns headed with the prior (2010-11) and current (2011-12) school years show:

- "Students" – How many students from this group had achievement data.
- "Achievement Points" – How many achievement points those students earned, on a scale from zero to 50. (Achievement points are calculated in a similar way as they are for all students in the "Student Achievement" area of the Accountability Index.)

The "Change" column shows **the change in achievement points** from the prior to the current year.

Finally, the table includes a pair of "Gap" columns at the end, showing the differences in achievement points between the group and the comparison group in the prior and current years. (A positive number means that there is a gap—that the group scored lower than the comparison; a negative number shows that the group scored higher than the comparison.)

Example (highlighted in yellow): Last year, students with disabilities earned 20.8 achievement points; this year they earned 21.8 points, an increase of 1 point. By comparison, students without disabilities earned 33.4 points last year and 34.5 points this year, an increase of 1.1 points. Both groups increased but the gap between them—the number of points that students with disabilities are behind students without disabilities—grew slightly, from 12.6 points to 12.7 points.

The Closing Graduation Gaps table has the same layout, but instead of achievement points it shows graduation rates and gaps:

Sample High
Closing Graduation Gaps | Score 32.7/50

Group						Comparison Group						Gap	
	2009-10		2010-11		Change		2009-10		2010-11		Change	Prior Year	Current Year
	Students	Graduation Rate	Students	Graduation Rate			Students	Graduation Rate	Students	Graduation Rate			
American Indian or Alaskan Native	35	97.1%	42	90.5%	-6.7%	White not Hispanic	436	95.2%	402	92.5%	-2.6%	-2.0%	2.1%
Asian or Pacific Islander	*	*	*	*	*	White not Hispanic	*	*	*	*	*	*	*
Black not Hispanic	*	*	*	*	*	White not Hispanic	*	*	*	*	*	*	*
Hispanic	*	*	*	*	*	White not Hispanic	*	*	*	*	*	*	*
Students with Disabilities	38	81.6%	40	75.0%	-6.6%	Students without Disabilities	452	95.6%	429	93.2%	-2.3%	14.0%	18.2%
Economically Disadvantaged	*	*	*	*	*	Not Economically Disadvantaged	*	*	*	*	*	*	*
Limited English Proficient	*	*	*	*	*	English Proficient	*	*	*	*	*	*	*
"All 3" Supergroup	*	*	*	*	*	Not in "All 3" Supergroup	*	*	*	*	*	*	*
"SwD-ECD" Supergroup	*	*	*	*	*	Not in "SwD-ECD" Supergroup	*	*	*	*	*	*	*
"SwD-LEP" Supergroup	*	*	*	*	*	Not in "SwD-LEP" Supergroup	*	*	*	*	*	*	*
"ECD-LEP" Supergroup	28	67.9%	115	82.6%	14.8%	Not in "ECD-LEP" Supergroup	462	96.1%	354	94.6%	-1.5%	28.2%	12.2%

Closing Gaps Walkthrough

This walkthrough guides the user through determination of a Closing Achievement Gaps score in mathematics for Sample Elementary. It also includes a shorter description of a Closing Graduation Gaps determination for Sample High, illustrating how graduation differs in this Priority Area. To determine an overall Closing Gaps score, reading, mathematics, and graduation scores are calculated as appropriate and added.

Mathematics Gaps Example

Step 1: Convert Points to Rates

Closing achievement gaps data are presented in the School Report Card Detail in points—similar units as the Student Achievement area—for clarity. However, to determine a score we must convert the points to rates, which simply involves dividing the number of points by 50. For this illustration, only points data are shown:

Sample Elementary – Achievement Points

Group				Comparison Group				Gap	
	2010-11	2011-12	Change		2010-11	2011-12	Change	Prior Year	Current Year
	Achievement Points	Achievement Points			Achievement Points	Achievement Points			
Asian or Pacific Islander	13.5	17.3	3.8	White not Hispanic	34.3	35.8	1.4	20.8	18.4
Students with Disabilities	20.8	21.8	1	Students without Disabilities	33.4	34.5	1.1	12.6	12.7
Economically Disadvantaged	23.4	25.1	1.7	Not Economically Disadvantaged	34.8	36.4	1.6	11.4	11.3

Divided by 50



Sample Elementary – Achievement Rates

Group				Comparison Group				Gap	
	2010-11	2011-12	Change		2010-11	2011-12	Change	Prior Year	Current Year
	Achievement Rate	Achievement Rate			Achievement Rate	Achievement Rate			
Asian or Pacific Islander	0.270	0.346	0.076	White not Hispanic	0.686	0.716	0.028	0.416	0.368
Students with Disabilities	0.416	0.436	0.020	Students without Disabilities	0.668	0.690	0.022	0.252	0.254
Economically Disadvantaged	0.468	0.502	0.034	Not Economically Disadvantaged	0.696	0.728	0.032	0.228	0.226

Step 2: Calculate a Raw Score for Each Group-Comparison Pair

The simplest way to look at closing gaps would be to compare the prior year's gap to the current, but this would create an undesirable incentive for schools to close gaps by allowing the performance of students in comparison groups to stagnate or even decline, rather than by improving the performance of groups at a lower level. Therefore, we focus our scoring method on performance change among the "gap" groups, and performance of comparison groups counts only when it declines, and then as a penalty. In other words, all progress for target groups is rewarded, regardless of the effect on gap sizes, but that gain can be reduced or negated by falling performance of comparison groups.

Definitions

Group Change = Group's achievement rate in the current year
– Group's achievement rate in the prior year

Comparison Group Change
= Comparison group's achievement rate in the current year
– Comparison group's achievement rate in the prior year

Penalty = $\frac{\text{Comparison Group Change}}{2}$ when Comparison Group Change < 0

Formula

Raw Score = Group Change + Penalty (when applicable)

Calculation

Group	Comparison Group			Raw	
	Change		Change	Penalty	Score
Asian or Pacific Islander	0.076	White not Hispanic	0.028	0	0.076
Students with Disabilities	0.020	Students without Disabilities	0.022	0	0.020
Economically Disadvantaged	0.034	Not Economically Disadvantaged	0.032	0	0.034

Step 3: Determine the Closing Achievement Gaps Score

Once we have a raw score for each group-comparison pair in the school, we average those raw scores together and use a formula to determine the Closing Achievement Gaps score. The formula is complex, in order to put Closing Gaps scores on a similar scale to Student Achievement. Like the WKCE, Wisconsin's new school accountability system includes different kinds of data with different meanings, and it is necessary to align components like Closing Gaps to a common scale.

Definitions

Average Raw Score = Average of all raw scores calculated for the school

Possible Points = 25 if the school has Closing Graduation Gaps data, or 50 if it does not

Formula

$$\text{Closing Achievement Gaps Score} = [(\text{Average Raw Score} \times 3.71) + 0.63] \times \text{Possible Points}$$

Note: 3.71 and 0.63 are numbers that align Closing Gaps to a scale based on Student Achievement scores.

Calculation

$$\text{Average Raw Score} = \frac{0.076 + 0.020 + 0.034}{3} = 0.043; \text{Possible Points} = 50$$

$$\text{Closing Achievement Gaps Score} = [(0.043 \times 3.71) + 0.63] \times 50 = \mathbf{39.5}$$

Sample Elementary has a Closing Achievement Gaps score in mathematics of 39.5.

Closing Graduation Gaps Example

The process for calculating a Closing Graduation Gaps score is nearly identical to that for achievement gaps, with three differences:

1. Graduation data are converted from percentages to rates by dividing the percentage by 100.
2. The number of possible points is 50 if the school has Closing Achievement Gaps data described above, or 100 if it does not.
3. The numbers in the score formula that align Closing Gaps to Student Achievement are different:

$$\text{Closing Graduation Gaps Score} = [(\text{Average Raw Score} \times 0.79) + 0.65] \times \text{Possible Points}$$

Let's step through the process to illustrate using Sample High School data.

Step 1: Convert Percentages to Rates

Sample High – Graduation Rates

Group				Comparison Group				Gap	
	2009-10	2010-11	Change		2009-10	2010-11	Change	Prior Year	Current Year
	Graduation Rate	Graduation Rate			Graduation Rate	Graduation Rate			
American Indian or Alaskan Native	0.971	0.905	-0.067	White not Hispanic	0.952	0.925	-0.026	-0.020	-0.021
Students with Disabilities	0.816	0.750	-0.066	Students without Disabilities	0.956	0.932	-0.023	0.140	0.182
"ECD-LEP" Supergroup	0.679	0.826	0.148	Not in "ECD-LEP" Supergroup	0.961	0.946	-0.015	0.282	0.122

Step 2: Calculate a Raw Score for Each Group-Comparison Pair

Group	Comparison Group			Raw Score
	Change		Change Penalty	
American Indian or Alaskan Native	-0.067	White not Hispanic	-0.026 -0.013	-0.080
Students with Disabilities	-0.066	Students without Disabilities	-0.023 -0.012	-0.054
"ECD-LEP" Supergroup	0.148	Not in "ECD-LEP" Supergroup	-0.015 -0.008	0.140

Step 3: Determine the Closing Graduation Gaps Score

$$\text{Average Raw Score} = \frac{(-0.080) + (-0.054) + 0.140}{3} = 0.006; \text{Possible Points} = 50$$

$$\text{Closing Graduation Gaps Score} = [(0.006 \times 0.79) + 0.65] \times 50 = \mathbf{32.7}$$

Sample High has a Closing Graduation Gaps score of 32.7.

Closing Gaps Priority Area Worksheet

This worksheet has three parts: Closing Reading Achievement Gaps, Closing Mathematics Achievement Gaps, and Closing Graduation Gaps. Each part requires you to pull data from the Closing Gaps detail in the School Report Card Detail. **Note that the score calculated here may not exactly match the report card due to rounding.**

The report card for a particular school will include some or all Closing Gaps data:

- Closing Graduation Gaps only
- Closing Reading Achievement Gaps and Closing Mathematics Achievement Gaps
- All three Closing Gaps components

A school will not have Closing Achievement Gaps data and scores reported unless they are available for both reading and mathematics. The combination of Closing Gaps components calculated and reported for a school determines the number of possible points for each component:

Component	Present?	Possible points	Present?	Possible points	Present?	Possible points
Closing Reading Achievement Gaps	Yes	50	No	-	Yes	25
Closing Mathematics Achievement Gaps	Yes	50	No	-	Yes	25
Closing Graduation Gaps	No	-	Yes	100	Yes	50

Instructions

Complete the worksheets that include components calculated for the school, entering data from the School Report Card Detail where appropriate. When all applicable worksheets are complete, add the component scores to determine the school's total Closing Gaps score:

Closing Reading Achievement Gaps Score: _____ out of ____ points

Closing Mathematics Achievement Gaps Score: _____ out of ____ points

Closing Graduation Gaps Score: + _____ out of ____ points

Closing Gaps Priority Area Score: _____ out of 100 points

Closing Reading Achievement Gaps Worksheet

Step 1: Convert Points to Rates

Enter data from the "Change" columns under the "Group" or "Comparison Group" headings in the report card detail table.

If asterisks are given for a particular pair of group and comparison group, leave the boxes blank for that pair.

<u>Group</u>	<u>Change (in Points)</u>		<u>Change (in Rate)</u>	<u>Comparison Group</u>	<u>Change (in Points)</u>		<u>Change (in Rate)</u>
(1a) American Indian or Alaska Native		÷ 50 =	1a	(1b) White not Hispanic		÷ 50 =	1b
(1c) Asian or Pacific Islander		÷ 50 =	1c	(1d) White not Hispanic		÷ 50 =	1d
(1e) Black not Hispanic		÷ 50 =	1e	(1f) White not Hispanic		÷ 50 =	1f
(1g) Hispanic		÷ 50 =	1g	(1h) White not Hispanic		÷ 50 =	1h
(1i) Students with Disabilities		÷ 50 =	1i	(1j) Students without Disabilities		÷ 50 =	1j
(1k) Economically Disadvantaged		÷ 50 =	1k	(1k) Not Economically Disadvantaged		÷ 50 =	1l
(1m) Limited English Proficient		÷ 50 =	1m	(1n) English Proficient		÷ 50 =	1n
(1o) "All 3" Supergroup		÷ 50 =	1o	(1p) Not in "All 3" Supergroup		÷ 50 =	1p
(1q) "SwD-ECD" Supergroup		÷ 50 =	1q	(1r) Not in "SwD-ECD" Supergroup		÷ 50 =	1r
(1s) "SwD-LEP" Supergroup		÷ 50 =	1s	(1t) Not in "SwD-LEP" Supergroup		÷ 50 =	1t
(1u) "ECD-LEP" Supergroup		÷ 50 =	1u	(1v) Not in "ECD-LEP" Supergroup		÷ 50 =	1v

Step 2: Calculate a Raw Score for Each Group-Comparison Pair

Enter data from step 1 above only when the boxes contain data for a pair; if the pair's boxes above are blank, leave its boxes blank.

Under the "Penalty" column, calculate a penalty (comparison group's change ÷ 2) only when the comparison group's change is less than zero.

<u>Group-Comparison Pair</u>	<u>Group Change</u>	<u>Comparison Change</u>	<u>Penalty (Comparison Change ÷ 2)</u>	<u>Raw Score</u>
American Indian/White	Box 1a: 2a	Box 1b: 2b	Less than zero? ☐ Yes 2c	2a + 2c: 2d
Asian/White	Box 1c: 2e	Box 1d: 2f	Less than zero? ☐ Yes 2g	2e + 2g: 2h
Black/White	Box 1e: 2i	Box 1f: 2j	Less than zero? ☐ Yes 2k	2i + 2k: 2l
Hispanic/White	Box 1g: 2m	Box 1h: 2n	Less than zero? ☐ Yes 2o	2m + 2o: 2p
Students with/without Disabilities	Box 1i: 2q	Box 1j: 2r	Less than zero? ☐ Yes 2s	2q + 2s: 2t
Economically Disadvantaged/Not	Box 1k: 2u	Box 1l: 2v	Less than zero? ☐ Yes 2w	2u + 2w: 2x
Limited English Proficient/Proficient	Box 1m: 2y	Box 1n: 2z	Less than zero? ☐ Yes 2aa	2y + 2aa: 2ab
"All 3" Supergroup/Not	Box 1o: 2ac	Box 1p: 2ad	Less than zero? ☐ Yes 2ae	2ac + 2ae: 2af
"SwD-ECD" Supergroup/Not	Box 1q: 2ag	Box 1r: 2ah	Less than zero? ☐ Yes 2ai	2ag + 2ai: 2aj
"SwD-LEP" Supergroup/Not	Box 1s: 2ak	Box 1t: 2al	Less than zero? ☐ Yes 2am	2ak + 2am: 2an
"ECD-LEP" Supergroup/Not	Box 1u: 2ao	Box 1v: 2ap	Less than zero? ☐ Yes 2aq	2ao + 2aq: 2ar

Step 3: Determine the Closing Reading Achievement Gaps Score

(3a) Total of "Raw Score" column in step 2:

3a

(3b) Number of boxes with data in step 2 "Raw Score" column:

3b

Average Raw Score: (3c) Enter $3a \div 3b$:

3c

(3d) Does the school have Closing Graduation Gaps data? 3d ☐ Yes ☐ No

Possible Points: (3e) If 3d is "Yes," enter 25; if "No," enter 50:

3e

(3f) Enter Average Raw Score from box 3c:

3f

(3g) Multiply box 3f by 3.71:

3g

(3h) Add box 3g plus 0.63:

3h

(3i) Enter Possible Points from box 3e:

3i

Closing Reading Achievement Gaps Score: (3j) Multiply boxes 3h and 3i:

3j

Closing Mathematics Achievement Gaps Worksheet**Step 1: Convert Points to Rates**

Enter data from the "Change" columns under the "Group" or "Comparison Group" headings in the report card detail table.

If asterisks are given for a particular pair of group and comparison group, leave the boxes blank for that pair.

<u>Group</u>	<u>Change (in Points)</u>		<u>Change (in Rate)</u>	<u>Comparison Group</u>	<u>Change (in Points)</u>		<u>Change (in Rate)</u>
(1a) American Indian or Alaska Native		$\div 50 =$	1a	(1b) White not Hispanic		$\div 50 =$	1b
(1c) Asian or Pacific Islander		$\div 50 =$	1c	(1d) White not Hispanic		$\div 50 =$	1d
(1e) Black not Hispanic		$\div 50 =$	1e	(1f) White not Hispanic		$\div 50 =$	1f
(1g) Hispanic		$\div 50 =$	1g	(1h) White not Hispanic		$\div 50 =$	1h
(1i) Students with Disabilities		$\div 50 =$	1i	(1j) Students without Disabilities		$\div 50 =$	1j
(1k) Economically Disadvantaged		$\div 50 =$	1k	(1k) Not Economically Disadvantaged		$\div 50 =$	1l
(1m) Limited English Proficient		$\div 50 =$	1m	(1n) English Proficient		$\div 50 =$	1n
(1o) "All 3" Supergroup		$\div 50 =$	1o	(1p) Not in "All 3" Supergroup		$\div 50 =$	1p
(1q) "SwD-ECD" Supergroup		$\div 50 =$	1q	(1r) Not in "SwD-ECD" Supergroup		$\div 50 =$	1r
(1s) "SwD-LEP" Supergroup		$\div 50 =$	1s	(1t) Not in "SwD-LEP" Supergroup		$\div 50 =$	1t
(1u) "ECD-LEP" Supergroup		$\div 50 =$	1u	(1v) Not in "ECD-LEP" Supergroup		$\div 50 =$	1v

Step 2: Calculate a Raw Score for Each Group-Comparison Pair

Enter data from step 1 above only when the boxes contain data for a pair; if the pair's boxes above are blank, leave its boxes blank.

Under the "Penalty" column, calculate a penalty (comparison group's change ÷ 2) only when the comparison group's change is less than zero.

Group-Comparison Pair	Group Change	Comparison Change	Penalty (Comparison Change ÷ 2)	Raw Score
American Indian/White	Box 1a: 2a	Box 1b: 2b	Less than zero? ☐ Yes 2c	2a + 2c: 2d
Asian/White	Box 1c: 2e	Box 1d: 2f	Less than zero? ☐ Yes 2g	2e + 2g: 2h
Black/White	Box 1e: 2i	Box 1f: 2j	Less than zero? ☐ Yes 2k	2i + 2k: 2l
Hispanic/White	Box 1g: 2m	Box 1h: 2n	Less than zero? ☐ Yes 2o	2m + 2o: 2p
Students with/without Disabilities	Box 1i: 2q	Box 1j: 2r	Less than zero? ☐ Yes 2s	2q + 2s: 2t
Economically Disadvantaged/Not	Box 1k: 2u	Box 1l: 2v	Less than zero? ☐ Yes 2w	2u + 2w: 2x
Limited English Proficient/Proficient	Box 1m: 2y	Box 1n: 2z	Less than zero? ☐ Yes 2aa	2y + 2aa: 2ab
"All 3" Supergroup/Not	Box 1o: 2ac	Box 1p: 2ad	Less than zero? ☐ Yes 2ae	2ac + 2ae: 2af
"SwD-ECD" Supergroup/Not	Box 1q: 2ag	Box 1r: 2ah	Less than zero? ☐ Yes 2ai	2ag + 2ai: 2aj
"SwD-LEP" Supergroup/Not	Box 1s: 2ak	Box 1t: 2al	Less than zero? ☐ Yes 2am	2ak + 2am: 2an
"ECD-LEP" Supergroup/Not	Box 1u: 2ao	Box 1v: 2ap	Less than zero? ☐ Yes 2aq	2ao + 2aq: 2ar

Step 3: Determine the Closing Mathematics Achievement Gaps Score

(3a) Total of "Raw Score" column in step 2:

3a

(3b) Number of boxes with data in step 2 "Raw Score" column:

3b

Average Raw Score: (3c) Enter $3a \div 3b$:

3c

(3d) Does the school have Closing Graduation Gaps data? 3d ☐ Yes ☐ No

Possible Points: (3e) If 3d is "Yes," enter 25; if "No," enter 50:

3e

(3f) Enter Average Raw Score from box 3c:

3f

(3g) Multiply box 3f by 3.71:

3g

(3h) Add box 3g plus 0.63:

3h

(3i) Enter Possible Points from box 3e:

3i

Closing Mathematics Achievement Gaps Score: (3j) Multiply boxes 3h and 3i:

3j

Closing Graduation Gaps Worksheet

Step 1: Convert Percentages to Rates

Enter data from the "Change" columns under the "Group" or "Comparison Group" headings in the report card detail table.

If asterisks are given for a particular pair of group and comparison group, leave the boxes blank for that pair.

<u>Group</u>	<u>Change (in %)</u>		<u>Change (in Rate)</u>	<u>Comparison Group</u>	<u>Change (in %)</u>		<u>Change (in Rate)</u>
(1a) American Indian or Alaska Native		÷ 100 =	1a	(1b) White not Hispanic		÷ 100 =	1b
(1c) Asian or Pacific Islander		÷ 100 =	1c	(1d) White not Hispanic		÷ 100 =	1d
(1e) Black not Hispanic		÷ 100 =	1e	(1f) White not Hispanic		÷ 100 =	1f
(1g) Hispanic		÷ 100 =	1g	(1h) White not Hispanic		÷ 100 =	1h
(1i) Students with Disabilities		÷ 100 =	1i	(1j) Students without Disabilities		÷ 100 =	1j
(1k) Economically Disadvantaged		÷ 100 =	1k	(1k) Not Economically Disadvantaged		÷ 100 =	1l
(1m) Limited English Proficient		÷ 100 =	1m	(1n) English Proficient		÷ 100 =	1n
(1o) "All 3" Supergroup		÷ 100 =	1o	(1p) Not in "All 3" Supergroup		÷ 100 =	1p
(1q) "SwD-ECD" Supergroup		÷ 100 =	1q	(1r) Not in "SwD-ECD" Supergroup		÷ 100 =	1r
(1s) "SwD-LEP" Supergroup		÷ 100 =	1s	(1t) Not in "SwD-LEP" Supergroup		÷ 100 =	1t
(1u) "ECD-LEP" Supergroup		÷ 100 =	1u	(1v) Not in "ECD-LEP" Supergroup		÷ 100 =	1v

Step 2: Calculate a Raw Score for Each Group-Comparison Pair

Enter data from step 1 above only when the boxes contain data for a pair; if the pair's boxes above are blank, leave its boxes blank.

Under the "Penalty" column, calculate a penalty (comparison group's change ÷ 2) only when the comparison group's change is less than zero.

<u>Group-Comparison Pair</u>	<u>Group Change</u>	<u>Comparison Change</u>	<u>Penalty (Comparison Change ÷ 2)</u>	<u>Raw Score</u>
American Indian/White	Box 1a: 2a	Box 1b: 2b	Less than zero? ☐ Yes 2c	2a + 2c: 2d
Asian/White	Box 1c: 2e	Box 1d: 2f	Less than zero? ☐ Yes 2g	2e + 2g: 2h
Black/White	Box 1e: 2i	Box 1f: 2j	Less than zero? ☐ Yes 2k	2i + 2k: 2l
Hispanic/White	Box 1g: 2m	Box 1h: 2n	Less than zero? ☐ Yes 2o	2m + 2o: 2p
Students with/without Disabilities	Box 1i: 2q	Box 1j: 2r	Less than zero? ☐ Yes 2s	2q + 2s: 2t
Economically Disadvantaged/Not	Box 1k: 2u	Box 1l: 2v	Less than zero? ☐ Yes 2w	2u + 2w: 2x
Limited English Proficient/Proficient	Box 1m: 2y	Box 1n: 2z	Less than zero? ☐ Yes 2aa	2y + 2aa: 2ab
"All 3" Supergroup/Not	Box 1o: 2ac	Box 1p: 2ad	Less than zero? ☐ Yes 2ae	2ac + 2ae: 2af
"SwD-ECD" Supergroup/Not	Box 1q: 2ag	Box 1r: 2ah	Less than zero? ☐ Yes 2ai	2ag + 2ai: 2aj
"SwD-LEP" Supergroup/Not	Box 1s: 2ak	Box 1t: 2al	Less than zero? ☐ Yes 2am	2ak + 2am: 2an
"ECD-LEP" Supergroup/Not	Box 1u: 2ao	Box 1v: 2ap	Less than zero? ☐ Yes 2aq	2ao + 2aq: 2ar

Step 3: Determine the Closing Graduation Gaps Score

(3a) Total of "Raw Score" column in step 2:

3a

(3b) Number of boxes with data in step 2 "Raw Score" column:

3b

Average Raw Score: (3c) Enter $3a \div 3b$:

3c

(3d) Does the school have Closing Achievement Gaps data? 3d ☐ Yes ☐ No

Possible Points: (3e) If 3d is "Yes," enter 50; if "No," enter 100:

3e

(3f) Enter Average Raw Score from box 3c:

3f

(3g) Multiply box 3f by 0.79:

3g

(3h) Add box 3g plus 0.65:

3h

(3i) Enter Possible Points from box 3e:

3i

Closing Graduation Gaps Score: (3j) Multiply boxes 3h and 3i:

3j

Calculating a Score for the On-Track and Postsecondary Readiness Priority Area

The On-Track and Postsecondary Readiness Priority Area is designed to evaluate schools on high-impact indicators that predict student success. It includes attendance and graduation, ACT participation and performance, and student achievement among 3rd graders in reading and 8th graders in mathematics.

Background

The mission of Wisconsin public schools is to **ensure that every student becomes a high school graduate ready for college and career**. The process of getting a student to graduation begins well before 12th grade, and there are key indicators throughout elementary, middle, and high school that have a direct impact on a student's future likelihood of success. This Priority Area is designed to hold schools accountable on a number of these key indicators.

A graduation/attendance component makes up the bulk of this Priority Area's score. Schools that graduate students are held accountable for graduation rates, and other schools are held accountable for attendance rates. (Among Wisconsin high schools, attendance and graduation track each other fairly closely and have similar, narrow distributions of high rates.)

- **Attendance** drives all aspects of student success throughout their school career.
- **Graduation rate**, which we measure as a cohort rate—the percentage of students starting high school together who graduate within a certain time—measures the outcome of our schools' overarching mission.

Several other On-Track measures may also contribute to a school's Priority Area score.

- **Reading achievement in 3rd grade** and **mathematics achievement in 8th grade** are measures that strongly predict future success in school transitions and graduation.
- **Participation and performance on the ACT**—the most widely-taken college placement examination in Wisconsin—is the best measure of college readiness we currently have.

Due to the diversity of school types in Wisconsin, not all of these other On-Track measures apply to every school. As a result, combining the measures into a Priority Area score in a way that treats all schools fairly was necessarily a complex process. As other indicators become available, we will evaluate them for inclusion in this Priority Area.

Reading the Report Card Detail

Attendance

The first table shown in the On-Track and Postsecondary Readiness detail is the attendance rate, the number of days that students actually attended divided by the number of days they could possibly have attended. Data are presented for all students and the lowest-attending student group, which are averaged to determine the attendance score:

Group	Enrollment	Attended Days	Possible Days	Rate
All Students	248	42,199.0	43,830.0	96.3%
Lowest Group: Students with Disabilities	32	5,195.5	5,604.5	92.7%

Graduation

The next table shows graduation rate information:

Group	Four-Year Cohort Graduation Rate			Six-Year Cohort Graduation Rate		
	Students in Cohort	Graduates	Rate	Students in Cohort	Graduates	Rate
All Students	311	255	82.0%	328	299	91.2%

Graduation rates are given for a cohort of students comprising the high school students who make up a particular four-year graduating class and do not transfer to a private school, move to another state or country, or are deceased. We report two graduation rates:

- The four-year cohort graduation rate is the percentage of students in the cohort at the end of the fourth year who have graduated from high school.
- The six-year cohort graduation rate is the percentage of students in the cohort at the end of the sixth year (e.g. at the end of 2012-13 for the 2010-11 cohort) who have graduated from high school. This “extended” rate is used to include students who require more than four years to finish high school. Note: For the first year of accountability determinations (2011-12) we will use a five-year rate rather than a six-year rate because six-year data are not yet available.

ACT Participation and Performance

The third table provides information on how many 12th grade students took the ACT and how they did:

Group	Enrolled	Tested		Reading		English		Mathematics		Science	
	Students	Students	Percent	Students	Percent	Students	Percent	Students	Percent	Students	Percent
12 th Graders	313	170	54.3%	125	73.5%	142	83.5%	120	70.6%	160	94.1%

The percentage of 12th graders tested divided by the number enrolled gives the school’s ACT participation rate. The content area breakdowns show how many of the ACT-tested students reached college readiness benchmarks on those portions of the ACT (we use students’ best exams for this measure):

- Reading: 21 or higher
- English: 18 or higher
- Mathematics: 22 or higher
- Science: 24 or higher

(More information on ACT's college readiness benchmarks is available at <http://www.act.org/education/benchmarks.html>)

Example: At the school shown, 170 of 313 (54.3%) of 12th graders took the ACT. Of those 170 tested students, 125 (73.5%) scored 21 or higher in reading, 142 (83.5%) scored 18 or higher in English, 120 (70.6%) scored 22 or higher in mathematics, and 160 (94.1%) scored 24 or higher in science.

3rd Grade Reading/8th Grade Mathematics Achievement

The final two tables in the On-Track and Postsecondary Readiness detail give information on reading achievement for 3rd grade students and mathematics achievement for 8th grade students. These tables are presented in the same format as Student Achievement, described on page 10.

The difference between this specific measure and other parts of the report card is in how “cell size”—the minimum number of students with data necessary to calculate a score—is used. In most places we use a cell size of 20 in the most recent year, but applying this to a single grade would omit a large number of small elementary schools. Instead, for this measure only, we use a cell size of 20 over the two most recent years. This change affects only whether data is presented on the report card and used to determine a score, not the process by which the score is calculated.

Combining Individual Components into a Priority Area Score

The graduation/attendance component of On-Track, which applies to every school, has a maximum score of 80 points. The other On-Track components add up to a possible maximum of 20 points. Because different components out of the three ‘Other’ On-Track components apply to different types of schools, the number of points possible for each one depends on what mix of them apply to a given school, as specified by the following table.

‘Other’ On-Track Components	3 rd Grade Reading	Alone	20 points
		With 8 th grade mathematics	10 points
		With both 8 th grade mathematics and ACT participation & performance	5 points
	8 th Grade Mathematics	Alone	20 points
		With 3 rd grade reading	10 points
		With ACT participation & performance	10 points
		With both 3 rd grade reading and ACT participation & performance	5 points
	ACT Participation and Performance	Alone	20 points
		With 3 rd grade reading and/or 8 th grade mathematics	10 points

On-Track Walkthrough #1

This walkthrough will use data on attendance and 3rd grade reading achievement to determine a score for Sample Elementary School.

Step 1: Calculate the Graduation/Attendance Score

Group	Enrollment	Attended Days	Possible Days	Rate
All Students	248	42,997.5	43,830.0	98.1%
Lowest Group: Hispanic Students	31	5,346.0	5,656.5	94.5%

This is an elementary school; it does not graduate students, so its attendance rate is used to determine the score. The graduation/attendance score is simply the average of the all students and lowest group rates (expressed as a decimal, not a percentage) multiplied by 80:

$$\text{Graduation/Attendance Score} = \frac{\text{All Student Rate} + \text{Lowest Group Rate}}{2} \times 80$$

$$\text{Graduation/Attendance Score} = \frac{0.981 + 0.945}{2} \times 80 = 77.0$$

Step 2: Calculate the 3rd Grade Reading Achievement Score

Performance Level	Points Multiplier	2009-10			2010-11			2011-12		
		Students		Points	Students		Points	Students		Points
		Count	Percent		Count	Percent		Count	Percent	
Advanced	1.5	9	20.9%	13.5	10	22.7%	15	8	19.0%	12
Proficient	1	11	25.6%	11	14	31.8%	14	14	33.3%	14
Basic	0.5	10	23.3%	5	9	20.5%	4.5	11	26.2%	5.5
Minimal Performance/ Not Tested	0	13	30.2%	0	11	25.0%	0	9	21.4%	0
Total Enrolled	-	43	100.0%	29.5	44	100.0%	33.5	42	100.0%	31.5

The method for calculating the 3rd grade reading and 8th grade mathematics achievement scores is the same as described in the Student Achievement walkthrough on pages 11-14, with the difference that the multiplier used in the final step varies depending on the number of possible points for this component. A simplified version of that walkthrough is presented here; for a detailed description, please see pages 11-14.

Step 2A: Assign and Average Points

$$\text{Prior Year 2 Average} = 29.5/43 = 0.686$$

$$\text{Prior Year 1 Average} = 33.5/44 = 0.761$$

$$\text{Current Year Average} = 31.5/42 = 0.750$$

Step 2B: Calculate Annual Weights

$$\text{Prior Year 2 Weight} = 1 \times \frac{\text{Prior Year 2 Enrollment}}{\text{Average Enrollment}} = 1 \times \frac{43}{(43 + 44 + 42)/3} = \mathbf{1.000}$$

$$\text{Prior Year 1 Weight} = 1.25 \times \frac{\text{Prior Year 1 Enrollment}}{\text{Average Enrollment}} = 1.25 \times \frac{44}{(43 + 44 + 42)/3} = \mathbf{1.279}$$

$$\text{Current Year Weight} = 1.5 \times \frac{\text{Current Year Enrollment}}{\text{Average Enrollment}} = 1.5 \times \frac{42}{(43 + 44 + 42)/3} = \mathbf{1.465}$$

Step 2C: Combine Points and Weights

$$\text{Prior Year 2 Score} = \text{Prior Year 2 Avg.} \times \text{Prior Year 2 Weight} = 0.686 \times 1.000 = \mathbf{0.686}$$

$$\text{Prior Year 1 Score} = \text{Prior Year 1 Avg.} \times \text{Prior Year 1 Weight} = 0.761 \times 1.279 = \mathbf{0.973}$$

$$\text{Current Year Score} = \text{Current Year Avg.} \times \text{Current Year Weight} = 0.750 \times 1.465 = \mathbf{1.099}$$

Step 2D: Calculate Component Score

$$\text{Comp. Score} = \frac{\text{Prior Year 2 Score} + \text{Prior Year 1 Score} + \text{Current Year Score}}{\text{Prior Year 2 Weight} + \text{Prior Year 1 Weight} + \text{Current Year Weight}} \times \text{Poss. Pts.}$$

Sample Elementary School only has a 3rd grade reading achievement component, so the number of possible points is 20:

$$\text{3rd Grade Reading Achievement Score} = \frac{0.686 + 0.973 + 1.099}{1.000 + 1.279 + 1.465} \times 20 = \mathbf{14.7}$$

Step 3: Determine the Total On-Track and Postsecondary Readiness Score

The total score for this Priority Area is the sum of all its components' scores:

Graduation/Attendance Score	77.0
3rd Grade Reading Achievement Score	+ 14.7
Total On-Track and Postsecondary Readiness Score	91.7

Sample Elementary School has an On-Track and Postsecondary Readiness score of 91.7.

On-Track Walkthrough #2

This walkthrough will use data on graduation and ACT participation and performance to determine a score for Sample High School.

Step 1: Calculate the Graduation/Attendance Score

Group	Four-Year Cohort Graduation Rate			Six-Year Cohort Graduation Rate		
	Students in Cohort	Graduates	Rate	Students in Cohort	Graduates	Rate
All Students	311	255	82.0%	328	299	91.2%

This is a high school; it graduates students, so its graduation rates are used to determine the score. The graduation/attendance score here is the average of the four-year and six-year cohort graduation rates (expressed as a decimal, not a percentage) multiplied by 80:

$$\text{Graduation/Attendance Score} = \frac{\text{4-Year Cohort Rate} + \text{6-Year Cohort Rate}}{2} \times 80$$

$$\text{Graduation/Attendance Score} = \frac{0.820 + 0.912}{2} \times 80 = \mathbf{69.3}$$

Step 2: Calculate the ACT Participation and Performance Score

Group	Enrolled	Tested		Reading		English		Mathematics		Science	
	Students	Students	Percent	Students	Percent	Students	Percent	Students	Percent	Students	Percent
12 th Graders	313	170	54.3%	125	73.5%	142	83.5%	120	70.6%	160	94.1%

The ACT participation and performance score is the average of the five rates in the table—participation (tested) rate and the four college-ready benchmark rates in reading, English, mathematics, and science—multiplied by the possible score. (Exception: If there are fewer than 20 ACT participants, then the percent that passed benchmark scores in each content area is not reliable enough to be used for this indicator. In this case, the ACT participation rate alone is used and is multiplied by the possible score to arrive at the score for ACT Participation and Performance. See Walkthrough #3.)

In this example, with no other components present for the school, the possible score is 20 points:

$$\text{ACT Score} = \frac{\text{Participation} + \text{Reading} + \text{English} + \text{Mathematics} + \text{Science}}{5} \times \text{Possible Score}$$

$$\text{ACT Score} = \frac{0.543 + 0.735 + 0.835 + 0.706 + 0.941}{5} \times 20 = \mathbf{15.0}$$

Step 3: Determine the Total On-Track and Postsecondary Readiness Score

Graduation/Attendance Score	69.3
ACT Participation and Performance Score +	15.0
Total On-Track and Postsecondary Readiness Score	84.3

Sample High School has an On-Track and Postsecondary Readiness score of 84.3.

On-Track Walkthrough #3

This walkthrough will use data on graduation, ACT participation, 8th grade mathematics achievement, and 3rd grade reading to determine a score for Sample K-12 School.

Step 1: Calculate the Graduation/Attendance Score

Attendance

Group	Enrollment	Attended Days	Possible Days	Rate
All Students	252	39,288.0	42,173.0	93.2%

Graduation

Group	Four-Year Cohort Graduation Rate			Six-Year Cohort Graduation Rate		
	Students in Cohort	Graduates	Rate	Students in Cohort	Graduates	Rate
All Students	21	19	90.5%	*	*	*

Sample K-12 School graduates students, so we use graduation rates to determine this score. Data for the six-year cohort rate are redacted—presumably, the six-year cohort must not meet the cell size of 20. Therefore, the graduation/attendance score is based only on the four-year cohort rate:

$$\text{Graduation/Attendance Score} = 4\text{-Year Cohort Rate} \times 80$$

$$\text{Graduation/Attendance Score} = 0.905 \times 80 = \mathbf{72.4}$$

Step 2: Calculate the ACT Participation and Performance Score

Group	Enrolled	Tested		Reading		English		Mathematics		Science	
	Students	Students	Percent	Students	Percent	Students	Percent	Students	Percent	Students	Percent
12 th Graders	21	14	66.7%	10	47.6%	11	52.4%	8	38.1%	5	23.8%

With 8th grade mathematics and 3rd grade reading achievement present for the school, the possible score for this component is 10 points. However, in this example, fewer than 20 students participated in the ACT, which triggers an exception to the rule for calculating the ACT Participation and Performance score. When fewer than 20 students participate, only the participation rate is used in the calculation, because the percent that achieved benchmark score for each of the four content areas is too unreliable. The modified formula that applies to this example is:

$$\text{ACT Score} = \frac{\text{Participation} + \text{Reading} + \text{English} + \text{Mathematics} + \text{Science}}{1 \ 5} \times \text{Possible Score}$$

$$\text{ACT Score} = \frac{0.667}{1} \times 10 = \mathbf{6.7}$$

Step 3: Calculate the 8th Grade Mathematics Achievement Score

Performance Level	Points Multiplier	2009-10			2010-11			2011-12		
		Students		Points	Students		Points	Students		Points
		Count	Percent		Count	Percent		Count	Percent	
Advanced	1.5	4	21.1%	6	3	16.7%	4.5	3	14.3%	4.5
Proficient	1	6	31.6%	6	5	27.8%	5	7	33.3%	7
Basic	0.5	5	26.3%	2.5	6	33.3%	3	8	38.1%	4
Minimal Performance/ Not Tested	0	4	21.1%	0	4	22.2%	0	3	14.3%	0
Total Enrolled	-	19	100.0%	14.5	18	100.0%	12.5	21	100.0%	15.5

Step 3A: Assign and Average Points

$$\text{Prior Year 2 Average} = 14.5/19 = \mathbf{0.763}$$

$$\text{Prior Year 1 Average} = 12.5/18 = \mathbf{0.694}$$

$$\text{Current Year Average} = 15.5/21 = \mathbf{0.738}$$

Step 3B: Calculate Annual Weights

$$\text{Prior Year 2 Weight} = 1 \times \frac{19}{(19 + 18 + 21)/3} = \mathbf{0.983}$$

$$\text{Prior Year 1 Weight} = 1.25 \times \frac{18}{(19 + 18 + 21)/3} = \mathbf{1.164}$$

$$\text{Current Year Weight} = 1.5 \times \frac{21}{(19 + 18 + 21)/3} = \mathbf{1.629}$$

Step 3C: Combine Points and Weights

$$\text{Prior Year 2 Score} = 0.763 \times 0.983 = \mathbf{0.750}$$

$$\text{Prior Year 1 Score} = 0.694 \times 1.164 = \mathbf{0.808}$$

$$\text{Current Year Score} = 0.738 \times 1.629 = \mathbf{1.202}$$

Step 3D: Calculate Component Score

With ACT participation and performance and 3rd grade reading achievement present for the school, the possible score for this component is 5 points:

$$\text{8th Grade Mathematics Achievement Score} = \frac{0.750 + 0.808 + 1.202}{0.983 + 1.164 + 1.629} \times 5 = \mathbf{3.7}$$

Step 4: Calculate the 3rd Grade Reading Achievement Score

Performance Level	Points Multiplier	2009-10			2010-11			2011-12		
		Students		Points	Students		Points	Students		Points
		Count	Percent		Count	Percent		Count	Percent	
Advanced	1.5	7	31.8%	10.5	3	17.6%	4.5	6	31.3%	9
Proficient	1	10	45.5%	10	8	47.1%	8	6	43.8%	6
Basic	0.5	3	13.6%	1.5	4	23.6%	2	3	18.8%	1.5
Minimal Performance/ Not Tested	0	2	9.1%	0	2	11.8%	0	1	6.3%	0
Total Enrolled	-	22	100.0%	22	17	100.0%	14.5	16	100.0%	16.5

Step 4A: Assign and Average Points

$$\text{Prior Year 2 Average} = 22/22 = \mathbf{1.000}$$

$$\text{Prior Year 1 Average} = 14.5/17 = \mathbf{0.853}$$

$$\text{Current Year Average} = 16.5/16 > \mathbf{1.000}$$

Note: Remember that the average has a ceiling of one—the true average for the current year is 1.031 (16.5/16) but we use 1.000 in the calculation.

Step 4B: Calculate Annual Weights

$$\text{Prior Year 2 Weight} = 1 \times \frac{22}{(22 + 17 + 16)/3} = \mathbf{1.200}$$

$$\text{Prior Year 1 Weight} = 1.25 \times \frac{17}{(22 + 17 + 16)/3} = \mathbf{1.159}$$

$$\text{Current Year Weight} = 1.5 \times \frac{16}{(22 + 17 + 16)/3} = \mathbf{1.309}$$

Step 4C: Combine Points and Weights

$$\text{Prior Year 2 Score} = 1.000 \times 1.200 = \mathbf{1.200}$$

$$\text{Prior Year 1 Score} = 0.853 \times 1.159 = \mathbf{0.989}$$

$$\text{Current Year Score} = 1.000 \times 1.309 = \mathbf{1.309}$$

Step 4D: Calculate Component Score

With ACT participation and performance and 8th grade mathematics achievement present for the school, the possible score for this component is 5 points:

$$\text{3rd Grade Reading Achievement Score} = \frac{1.200 + 0.989 + 1.309}{1.200 + 1.159 + 1.309} \times 5 = \mathbf{4.8}$$

Step 5: Determine the Total On-Track and Postsecondary Readiness Score

Graduation/Attendance Score	72.4
ACT Participation and Performance Score	6.7
8 th Grade Mathematics Achievement Score	3.7
3 rd Grade Reading Achievement Score	+ 4.8
Total On-Track and Postsecondary Readiness Score	87.6

Sample K-12 School has an On-Track and Postsecondary Readiness score of 85.5.

On-Track and Postsecondary Readiness Priority Area Worksheet

Introduction

This worksheet has four parts, for Graduation/Attendance, ACT Participation and Performance, 8th Grade Mathematics Achievement, and 3rd Grade Reading Achievement. Each part requires you to copy data from the On-Track and Postsecondary Readiness detail on **pages 8 and 9** of the school report card, and your school may not have data for every component—we only report data for components that have scores. **Note that the score calculated here may not exactly match the report card due to rounding.** The key on page 14 of this document may be used to help read the 8th grade mathematics/3rd grade reading tables.

Instructions

Complete the following worksheet only for the components of On-Track and Postsecondary Readiness with data on your school's report card. Remember that only one of attendance or graduation—not both—is used to calculate that portion of the score, which is worth up to 80 points. Use this grid to determine the number of possible points for each of the other On-Track components:

Possible points for 'Other' On-Track components

3rd Grade Reading	Alone	20 points
	With 8 th grade mathematics	10 points
	With both 8 th grade mathematics and ACT participation & performance	5 points
8th Grade Mathematics	Alone	20 points
	With 3 rd grade reading	10 points
	With ACT participation & performance	10 points
	With both 3 rd grade reading and ACT participation & performance	5 points
ACT Participation and Performance	Alone	20 points
	With 3 rd grade reading and/or 8 th grade mathematics	10 points

Total the components calculated for your school to determine the total Priority Area score:

Graduation/Attendance Score: _____ out of 80 points

ACT Participation and Performance Score: _____ out of _____ points

8th Grade Mathematics Achievement Score: _____ out of _____ points

3rd Grade Reading Achievement Score: + _____ out of _____ points

Total On-Track and Postsecondary Readiness Score: _____ out of _____ points

Graduation/Attendance Worksheet

Calculate the Graduation/Attendance Score

(1a) Does the school have a reported graduation rate(s)?	1a	☐ Yes	☐ No	
(1b) If 1a is "No," enter the attendance rate (in %):				1b
(1c) Divide box 1b by 100:				1c
(1d) If 1a is "Yes," enter the 4-year cohort graduation rate (in %):	1d			
(1e) If 1a is "Yes," enter the 6-year* cohort graduation rate (in %):	1e			
(1f) Add boxes 1d and 1e:				1f
(1g) Divide box 1f by 200:				1g
(1h) Enter whichever of boxes 1c or 1g has a value:				1h
Graduation/Attendance Score: (1i) Multiply box 1h by 80:				1i

ACT Participation and Performance Worksheet

Calculate the ACT Participation and Performance Score

(1a) Enter the number of 12 th graders tested on the ACT:	1a	
(1b) Enter the percent of 12 th graders tested on the ACT:	1b	
(1c) Is 1a, the number of tested students, 20 or more?	1c	☐ Yes ☐ No
If "No," skip lines 1d through 1g and enter the value for 1b in box 1h		
(1d) Enter the percent tested meeting the Reading benchmark:	1d	
(1e) Enter the percent tested meeting the English benchmark:	1e	
(1f) Enter the percent tested meeting the Mathematics benchmark:	1f	
(1g) Enter the percent tested meeting the Science benchmark:	1g	
(1h) Add boxes 1b and 1d through 1g:	1h	
(1i) Divide box 1h by 500 if 1c is "Yes" or 100 if 1c is "No":		1i
(1j) Enter the number of possible points:		1j
ACT Participation & Performance Score: (1k) Multiply box 1i by box 1j:		1k

8th Grade Mathematics Achievement Worksheet

Step 1: Assign and Average Points

If a year does not have data shown, leave that year's boxes blank.

Prior Year 2 Average

(1a) Total points earned (B)	1a	
(1b) Count of students (A)	1b	
(1c) Is box 1a greater than box 1b?	1c	☐ Yes ☐ No
Average: (1d) If 1c is "Yes," enter 1; if 1c is "No," divide box 1a by box 1b		1d

Prior Year 1 Average

(1e) Total points earned (D)	1e	
(1f) Count of students (C)	1f	
(1g) Is box 1e greater than box 1f?	1g	☐ Yes ☐ No
Average: (1h) If 1g is "Yes," enter 1; if 1g is "No," divide box 1e by box 1f		1h

Current Year Average

(1i) Total points earned (F)	1i	
(1j) Count of students (E)	1j	
(1k) Is box 1i greater than box 1j?	1k	☐ Yes ☐ No
Average: (1l) If 1k is "Yes," enter 1; if 1k is "No," divide box 1i by box 1j		1l

Step 2: Calculate Annual Weights

Average Enrollment

(2a) Prior Year 2 count of students (A) – leave blank if not shown	2a	
(2b) Prior Year 1 count of students (C) – leave blank if not shown	2b	
(2c) Current Year count of students (E)	2c	
(2d) Add boxes 2a through 2c		2d
(2e) How many of boxes 2a through 2c have values?		2e
Average enrollment: (2f) Divide box 2d by box 2e		2f

Prior Year 2 Weight

(2g) Is box 2a blank?	2g	☐ Yes ☐ No	If "Yes," move on to the "Prior Year 1 Weight" section.
(2h) Enter the count from box 2a		2h	
(2i) Enter the average from box 2f		2i	
Prior Year 2 Weight: (2j) Divide box 2h by box 2i			2j

Prior Year 1 Weight

(2k) Is box 2b blank?	2k	☐ Yes ☐ No	If "Yes," move on to the "Current Year Weight" section.
(2l) Enter the count from box 2b		2l	
(2m) Enter the average from box 2f		2m	
(2n) Divide box 2l by box 2m			2n
(2o) If 2g is "Yes," enter 1; if 2g is "No," enter 1.25			2o
Prior Year 1 Weight: (2p) Multiply box 2n by box 2o			2p

Current Year Weight

(2q) Are both boxes 2a and 2b blank?	2q	☐ Yes ☐ No	If "Yes," skip to box 2t.
(2q) Enter the count from box 2c		2q	
(2r) Enter the average from box 2f		2r	
(2s) Divide box 2q by box 2r			2s
Current Year Weight: (2t) If 2q is "No," multiply box 2s by 1.5; otherwise, enter 1			2t

Step 3: Combine Points and Weights

If a year does not have data, leave that year's boxes blank.

Prior Year 2 Score

(3a) Enter the average from box 1d	3a	
(3b) Enter the weight from box 2j	3b	
Prior Year 2 Score: (3c) Multiply box 3a by box 3b		3c

Prior Year 1 Score

(3d) Enter the average from box 1h	3d	
(3e) Enter the weight from box 2p	3e	
Prior Year 1 Score: (3f) Multiply box 3d by box 3e		3f

Current Year Score

(3g) Enter the average from box 1l

3g

(3h) Enter the weight from box 2t

3h

Current Score: (3i) Multiply box 3g by box 3h

3i

Step 4: Calculate Index Score

(4a) Enter the score from box 3c

4a

(4e) Enter the weight from box 2j

4e

(4b) Enter the score from box 3f

4b

(4f) Enter the weight from box 2p

4f

(4c) Enter the score from box 3i

4c

(4g) Enter the weight from box 2t

4g

(4d) Add boxes 4a through 4c

4d

(4h) Add boxes 4e through 4g

4h

(4i) Divide box 4d by box 4h

4i

(4j) Enter the number of possible points

4j

8th Grade Mathematics Achievement Score: (4k) Multiply box 4i by box 4j

4k

3rd Grade Reading Achievement Worksheet

Step 1: Assign and Average Points

If a year does not have data shown, leave that year's boxes blank.

Prior Year 2 Average

(1a) Total points earned (B)

1a

(1b) Count of students (A)

1b

(1c) Is box 1a greater than box 1b?

1c ☐ Yes ☐ No

Average: (1d) If 1c is "Yes," enter 1; if 1c is "No," divide box 1a by box 1b

1d

Prior Year 1 Average

(1e) Total points earned (D)

1e

(1f) Count of students (C)

1f

(1g) Is box 1e greater than box 1f?

1g ☐ Yes ☐ No

Average: (1h) If 1g is "Yes," enter 1; if 1g is "No," divide box 1e by box 1f

1h

Current Year Average

(1i) Total points earned (F)

1i

(1j) Count of students (E)

1j

(1k) Is box 1i greater than box 1j?

1k ☐ Yes ☐ No

Average: (1l) If 1k is "Yes," enter 1; if 1k is "No," divide box 1i by box 1j

1l

Step 2: Calculate Annual Weights

Average Enrollment

(2a) Prior Year 2 count of students (A) – leave blank if not shown

2a

(2b) Prior Year 1 count of students (C) – leave blank if not shown

2b

(2c) Current Year count of students (E)

2c

(2d) Add boxes 2a through 2c

2d

(2e) How many of boxes 2a through 2c have values?

2e

Average enrollment: (2f) Divide box 2d by box 2e

2f

Prior Year 2 Weight

(2g) Is box 2a blank? 2g ☐ Yes ☐ No If "Yes," move on to the "Prior Year 1 Weight" section.

(2h) Enter the count from box 2a

(2i) Enter the average from box 2f

Prior Year 2 Weight: (2j) Divide box 2h by box 2i

2h	
2i	
	2j

Prior Year 1 Weight

(2k) Is box 2b blank? 2k ☐ Yes ☐ No If "Yes," move on to the "Current Year Weight" section.

(2l) Enter the count from box 2b

(2m) Enter the average from box 2f

(2n) Divide box 2l by box 2m

(2o) If 2g is "Yes," enter 1; if 2g is "No," enter 1.25

Prior Year 1 Weight: (2p) Multiply box 2n by box 2o

2l		
2m		
	2n	
	2o	
		2p

Current Year Weight

(2q) Are both boxes 2a and 2b blank? 2q ☐ Yes ☐ No If "Yes," skip to box 2t.

(2q) Enter the count from box 2c

(2r) Enter the average from box 2f

(2s) Divide box 2q by box 2r

Current Year Weight: (2t) If 2q is "No," multiply box 2s by 1.5; otherwise, enter 1

2q		
2r		
	2s	
		2t

Step 3: Combine Points and Weights

If a year does not have data, leave that year's boxes blank.

Prior Year 2 Score

(3a) Enter the average from box 1d

(3b) Enter the weight from box 2j

Prior Year 2 Score: (3c) Multiply box 3a by box 3b

3a	
3b	
	3c

Prior Year 1 Score

(3d) Enter the average from box 1h

(3e) Enter the weight from box 2p

Prior Year 1 Score: (3f) Multiply box 3d by box 3e

3d	
3e	
	3f

Current Year Score

(3g) Enter the average from box 1l

(3h) Enter the weight from box 2t

Current Score: (3i) Multiply box 3g by box 3h

3g	
3h	
	3i

Step 4: Calculate Index Score

(4a) Enter the score from box 3c

(4b) Enter the score from box 3f

(4c) Enter the score from box 3i

(4d) Add boxes 4a through 4c

4a
4b
4c
4d

(4e) Enter the weight from box 2j

(4f) Enter the weight from box 2p

(4g) Enter the weight from box 2t

(4h) Add boxes 4e through 4g

4e
4f
4g
4h
4i
4j

(4i) Divide box 4d by box 4h

(4j) Enter the number of possible points

3rd Grade Reading Achievement Score: (4k) Multiply box 4i by box 4j

4k

Calculating Student Engagement Indicator Deductions

Some measures in our school accountability system do not show a wide range of variation between schools, but rather allow us to identify the small number of schools whose performance raises concern. Instead of including these measures within one of the Priority Areas, we place them into a separate category called Student Engagement Indicators. Failure to meet specific statewide goals for these indicators results in points being deducted from the school's weighted average Priority Areas score. The weighted average Priority Areas score minus any Student Engagement Indicator deductions equals the school's Overall Accountability Score.

The three Student Engagement Indicators are:

- **Test Participation:** With so much of the Accountability Index based on assessment data, it is important that schools test as many students as possible. *The goal is for schools to test at least 95 percent of each and every group of students in the school* in both the reading and mathematics assessments, as measured by either a one-year or multi-year test rate, whichever is more favorable. A school's performance is determined *by the lowest participation rate among all groups in either content area*. See the "Determining the Deduction" section of the Participation walkthrough below for more detail on this.

If a school's test participation rate is below the goal of 95 percent but is at least 85 percent, the school score is reduced by 5 points. If a school's rate is below 85 percent, its score is reduced by 10 points.

- **Absenteeism Rate:** Chronic absenteeism is a strong predictor of whether a student will struggle in the future or fail to graduate. For this Student Engagement Indicator, *the school's absenteeism rate is equal to the percentage of its students who are chronically absent*. Chronically absent means a student missed school at least 16 percent of the time. *The goal for this Student Engagement Indicator is a school absenteeism rate of less than 13 percent*—that is, less than 13 percent of a school's students were chronically absent.

If a school's absenteeism rate is 13 percent or more, the school's score is reduced by 5 points.

- **Dropout Rate:** Dropping out of school has a direct connection with a student's future success. *The goal for this Student Engagement Indicator is a dropout rate of less than 6 percent*.

If a school has a dropout rate of 6 percent or more, its school score is reduced by 5 points.

Each missed indicator results in a separate deduction from the weighted average Priority Areas score. For example, a school that misses the goals for absenteeism rate and dropout rate would be penalized 10 points.

The School Report Card Detail does not contain enough data in order to reproduce the exact calculations for the Student Engagement Indicators, so no worksheet is provided for these measures. Instead, this

section will describe in detail the process by which each of the student engagement indicators are calculated.

Test Participation

As stated above, the test participation engagement indicator is tiered into three levels:

- Meeting the goal: participation greater than or equal to 95% for all each and every group in both math and reading, resulting in no deduction;
- Failing to meet the goal: participation rate is less than 95% but greater than 85% for at least one group in either math or reading, resulting in a 5 point deduction;
- Failing to meet the lower threshold: participation rate is less than 85% for at least one group in either math or reading, resulting in a 10 point deduction.

Remember that groups can meet test participation thresholds based on the higher of the current year rate or a multi-year rate. The multi-year participation rate is calculated based on the **number of years in which a school has at least 20 students enrolled in tested grades**. For the vast majority of schools, the multi-year participation rate will be calculated using participation data from the last three years; however, some schools' multi-year participation rates will be calculated using the last two years. Schools in which there are at least 20 students enrolled in tested grades in only the current year will use only the current year's participation rates for determining whether or not the school met the goal.

Calculating Test Participation in the Current Year

To calculate test participation for the **current** year, follow the following steps:

1. Count the total number of students enrolled in tested grades at test time in the current year. This should be done at the "All Students" level, **and** for each ESEA group.
2. Remove any student for whom this year was their first year in country, as they are not required to test this year. **This step should be done for reading only, as these students are still required to take the mathematics section of the WSAS.**
3. Count the total number of students who took either the WKCE or the WAA. This should be done at the "All Students" level, **and** for each ESEA group. This step should be done separately for both math and reading.
4. To derive each group's current year participation rate, divide the number of students tested (the count from step 3) by the number of students enrolled (the count from step 1). This should be done at the "All Students" level, **and** for each ESEA group. This step should be done separately for both mathematics and reading.
5. Apply traditional rounding rules – for example, if a group had at least 20 students enrolled, and its participation rate in mathematics was 94.8%, this would round up to 95%, and the group is considered to be meeting the goal.

Calculating Test Participation over Multiple Years

To calculate test participation for the **multi-year** rate, follow the following steps:

1. Count the total number of students enrolled in tested grades at test time in **each of the last three years**. This should be done at the “All Students” level.
2. **In each year**, remove any student for whom that year was their first year in country, as they are not required to test that year. **This step should be done for reading only, as these students are still required to take the mathematics section of the WSAS.**
3. If there were at least 20 students enrolled in tested grades in **each** of the last three years, then test participation will be calculated using three years of data. If there were at least 20 students enrolled in tested grades in **each** of the last **two** years, then test participation will be calculated using two years of data. If there were at least 20 students enrolled in tested grades in only the **current** year, then test participation will be calculated using only the current year’s data.
4. **For each year going into the multi-year rate:** Count the total number of students who took either the WKCE or the WAA. This should be done at the “All Students” level, **and** for each ESEA group. This step should be done separately for both mathematics and reading.
5. **Sum the counts from steps 1 and 4:**
 - a. If the school is using three years of participation data (as derived in step 3), sum the total number of students enrolled in each of the last three years (the counts from step 1) and the total number of students tested in each of the last three years (the counts from step 3). This should be done at the “All Students”, and for each individual group. This step should be done separately for mathematics and reading. **Note that when three years of data are being used, the cell size for each group becomes 60.**
 - b. If the school is using two years of participation data (as derived in step 3), sum the total number of students enrolled in each of the last two years (the counts from step 1) and the total number of students tested in each of the last two years (the counts from step 3). This should be done at the “All Students”, and for each individual group. This step should be done separately for mathematics and reading. **Note that when two years of data are being used, the cell size for each group becomes 40.**
6. Derive each group’s participation rate by dividing the number of students tested (the count of students tested derived in step 5) by the number of students enrolled (the count of students enrolled derived in step 5). This should be done at the “All Students” level, **and** for each ESEA group. This step should be done separately for both math and reading.
7. **Apply the cell size to each group:**
 - a. If the school is using **three** years of data, the count of students **enrolled** in a group (derived in step 5) must be at least 60 in order for that group’s multi-year participation rate to be calculated.
 - b. If the school is using **two** years of data, the count of students **enrolled** in a group (derived in step 5) must be at least 40 in order for that group’s multi-year participation rate to be calculated.

8. Apply traditional rounding rules – for example, if a group’s multi-year participation rate in mathematics was 94.8%, this would round up to 95%, and the group is considered to be meeting the goal.

Determining the Deduction

Once both the **current year participation rates** and the **multi-year participation rates** have been calculated, take the following steps for the “All Students” group, and for each individual group:

1. For both the current year and the multi-year participation rates, take the lower of the mathematics and participation rates – this is the participation rate that counts towards the goal. For example, if the **current year** mathematics participation rate for White students is 93.7% and the **current year** reading participation rate for White students is 95.1%, the participation rate that counts towards the **current year** goal for White students is the mathematics participation rate (93.7%), meaning that the White students in this example would be failing to meet the current year goal. Use the same process for the multi-year rate.
2. If the group’s current year lowest participation rate **and** the group’s multi-year lowest participation rate are below the 95% goal (after applying traditional rounding rules), a five point deduction will be taken from the school’s Overall Accountability Score. If the group’s current year lowest participation rate and the multi-year lowest participation rate are below the 85% goal (after applying traditional rounding rules), a ten point deduction will be taken from the school’s Overall Accountability Score. This step is calculated for every group present in the school. If **any** of the groups fail to meet the current year goal **or** the multi-year goal, a deduction is taken.
3. Only one deduction will be taken from the school. For example, if a school has data for five groups, and three of the groups miss both the current year goal and the multi-year goal, the school does **not** experience three deductions; only one deduction is taken.
4. If the school has only one year of test participation data, no multi-year participation rates are calculated, and the steps described in part 1 above are applied only to the current year’s participation rates.

Absenteeism

Chronic absenteeism is a strong predictor of whether a student will struggle in the future or fail to graduate. For this Student Engagement Indicator, the school’s absenteeism rate is equal to the **percentage of its students who are chronically absent**. For the purposes of this indicator, chronically absent means a student misses school at least 16 percent of the time. The **goal** for this Student Engagement Indicator is a school absenteeism rate of **less than 13 percent**—that is, less than 13 percent of the school’s students were chronically absent.

To calculate your school’s absenteeism rate, use the following steps:

Calculating the Absenteeism Rate

1. Count the number of students who enrolled in your school **for at least 20 days at any time during the prior school year**. Enrollment data come from ISES year end data, and due to data collection timelines, DPI must use the prior year's enrollment and attendance data to calculate the absenteeism rate.
2. For **each individual student** derived in step 1, calculate that student's attendance rate. This is done by dividing the total number of days the student attended school by the total number of possible days the student could have attended school. **Note that DPI does not have data on excused versus unexcused absences – it is the district's responsibility to ensure that attendance days are being recorded and reported in accordance with DPI guidelines.**
3. Count the number of students whose attendance rate is **84.0% or below**. These students are flagged as being chronically absent. Apply traditional rounding rules to the attendance rate – for example, an attendance rate of 84.05% would round up to 84.1%, and the student would **not** be flagged as chronically absent.
4. Divide the count of students flagged as chronically absent (step 3) by the count of enrolled students (step 1). This is the school's absenteeism rate. Note that no rounding takes place when calculating the absenteeism rate – for example, if a school's absenteeism rate is 12.9%, it will **not** be rounded up to 13.0%. This school would be considered to be meeting the goal.
5. If the absenteeism rate from step 4 is **13.0% or above**, a five point deduction will be taken from the school's Overall Accountability Score.

Dropout

Dropping out of school has a direct connection with a student's future success. The **goal** for this Student Engagement Indicator is a dropout rate of **less than 6 percent**.

To calculate your school's dropout rate, use the following steps:

Calculating the Dropout Rate

1. Count the number of students who enrolled in your school **who were in 7th grade or above in the prior year**. Note that due to ISES data collection timelines, the prior year's data must be used when calculating the dropout rate.
2. Count the number of students who were considered to be either half-term or full-term dropouts in the prior year.
3. Divide the count of total dropouts (derived in step 2) by the count of total students (derived in step 1). This is the school's dropout rate. Note that no rounding takes place when calculating the dropout rate – for example, if a school's dropout rate is 5.9%, it will **not** be rounded up to 6.0%. This school would be considered to be meeting the goal.
4. If the dropout rate from step 3 is **6.0% or above**, a five point deduction will be taken from the school's Overall Accountability Score.