



R-2 ACADEMIC ACHIEVEMENT - MATHEMATICS SUMMARY OF PROGRESS STATUS APRIL 2023

SUPERINTENDENT CERTIFICATION

With respect to R-2 Academic Achievement – Mathematics taken as a whole, the superintendent certifies that the proceeding information is accurate and complete, and the district is:

- Making Reasonable Progress
X Making Reasonable Progress, with Exception
Failing to Make Reasonable Progress

Summary Statement by Administration

Monitoring of results policies is part of the ongoing process of district performance evaluation and superintendent evaluation. This report includes a Data Analysis on page 2 presenting an administrative summary of the data and a Capacity Building/Recommendations section on the last page outlining new practice or protocol to be utilized for the next reporting timeframe.

Signed: [Signature] Superintendent Date: 4/10/2023

SCHOOL BOARD ACTION

With respect to R-2 Academic Achievement – Mathematics, the Board:

- Accepts the report as making reasonable progress
X Accepts the report as making reasonable progress, with exceptions
Finds the district failing to make reasonable progress

Summary Statement/Motion of the Board

Motion by Mr. Eastgate to accept the R-2.1 Academic Achievement – Mathematics Monitoring Report as Making Reasonable Progress, with Exception, seconded by Ms. Peterson. Motion carried.

Signed: [Signature] Board President Date: 4/10/2023

Data Analysis

North Dakota State Assessment Comparison data indicates we are exceeding the state average in grades 3-5, and grade 7. In grades 6 and 8, we are within 1-2% from the state average. This is a trend in these grade levels. Curriculum teams continue to work on guaranteed and viable, with a focus on vocabulary, which should impact learning. We continue to exceed the state on the ACT, in the area of mathematics.

This trend is also evident in the Measures of Academic Progress (MAP) where grades 3, 4, 5, and 7 met the target, while grades 6 and 8 saw slight decreases. When using this same data to measure expected targeted growth, grade 3 met the target. Grades 5, 6, and 8 were within 5% and grades 2, 4, and 7 greater than 5% from meeting the target. All grades with the exception of grade 2, surpassed the national average of 50%. Grade 2 was within 1% of the national average. All subgroups exceeded the national average and target except economically disadvantaged, Indigenous, and Hispanic. These three subgroups were within 2-4% of the target. It is important to note that Economically Disadvantaged numbers are not accurate due to all students receiving free lunch 20-21 and 21-22.

Every grade level surpassed the target of a 2.5, or B average. We are recommending that the target is increased for grades k-2, 5-6, and 8. The number of students taking beyond the minimum requirements, in the area of math, did drop slightly. We are within 2% of the target.

Guiding coalition teams continues to be an important and foundational factor in auditing the curricular program. Their focus on vertical alignment, guaranteed and viable, and vocabulary are key components in moving forward. Finally, please see Capacity Building/Recommendations on the last page to review additional inputs BPS has put in place this year to address learning and continued growth of our students and staff.

R-2.1 Academic Achievement – Mathematics

This section provides readers a summary of the data they are about to review.

Each student will meet or exceed targeted growth and proficiency using critical and creative thinking.

Each Student Will:

<p>2.1 Achieve targeted growth and proficiency in the following disciplines:</p> <ul style="list-style-type: none"> ELA Mathematics Science Social Studies 	<p>Making Reasonable Progress, with Exception</p>
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2.1 Mathematics

Superintendent Interpretation:

- **External assessments** include assessments with national norms that are administered within specified windows as a part of state requirements.
- **Proficiency** means meeting or exceeding the knowledge and skill requirements of the specified measure.
- **Grade level target** on the NWEA (MAP) assessment is considered 50th percentile or higher.
- **Proficiency** on the NDSA is considered performing at or above grade level.
- **Proficiency** in the standards means that students have demonstrated that they know, understand, and are able to apply knowledge and skills at the “proficient” level of district proficiency scales.
- **Proficiency** is defined as “College Ready” on the ACT Aspire and ACT which is based upon the following percentiles and ACT cut scores. This score is an indication of the extent to which they are prepared for college-level work. The ACT consists of curriculum-based tests of educational development in English, mathematics, reading, and science designed to measure the skills needed for success in first-year college coursework.
- **Cut Score** is the minimum score needed on the ACT per subject-area to indicate a 50% chance of obtaining a B or higher or about a 75% chance of obtaining a C or higher in the corresponding credit-bearing college courses.
- **Targeted growth** is the expected growth defined by national norms on a particular assessment. National data indicates that 50% of students typically meet their expected targeted growth.
- **Minimum requirements** include BPS graduation expectations for high school and core courses in K-12.
- “n” equals number of students.

Minimum Score On Track for College Readiness				
	English	Math	Science	Reading
PreACT 8/9 Grade 9	13	18	19	18
PreACT Grade 10	15	19	20	20
Minimum ACT Cut Score				
ACT	18	22	23	22
Minimum Expected Percentile				
	English	Math	Science	Reading
PreACT 8/9 Grade 9	34	63	72	48
PreACT Grade 10	43	66	67	55
ACT	42	63	70	60

COMPARISON DATA – OUR STUDENTS COMPARED TO OTHERS IN THE STATE

Indicator 1: Students in grades 3 - 8 who are Advanced or Proficient on the NDSA Mathematics Section will meet or exceed the state performance.		Making Reasonable Progress, with Exception
Green	Met or Exceeded	
Yellow	Within 5%	
Red	Not Met	

Evidence:

Percentage of Students Advanced or Proficient on the NDSA			
Year	Grade	State	District
2018-2019	3	49%	62%
2019-2020	3	COVID	COVID
2020-2021	3	48%	57%
2021-2022	3	48%	55%
2018-2019	4	43%	48%
2019-2020	4	COVID	COVID
2020-2021	4	36%	44%
2021-2022	4	37%	43%
2018-2019	5	48%	55%
2019-2020	5	COVID	COVID
2020-2021	5	42%	47%
2021-2022	5	43%	54%
2018-2019	6	47%	47%
2019-2020	6	COVID	COVID
2020-2021	6	39%	34%
2021-2022	6	40%	38%
2018-2019	7	40%	39%
2019-2020	7	COVID	COVID
2020-2021	7	38%	41%
2021-2022	7	37%	44%
2018-2019	8	47%	45%
2019-2020	8	COVID	COVID
2020-2021	8	38%	36%
2021-2022	8	34%	33%

2021-2022 Analysis: We are consistently outperforming the state in all grades except 6 and 8. We are within 2% in both grades 6 and 8.

Indicator 2: The district mean scores will meet or exceed the state mean score on the ACT in the area of Mathematics.		Making Reasonable Progress
Green	Met or Exceeded	
Yellow	Within 1 Point	
Red	Not Met	

Evidence:

Year	Number of Students Tested		Math	
	State	District	State	District
2016	7379	849	20.3	20.2
2017	7399	834	20.4	20.3
2018	7282	827	20.3	20.1
2019	7451	845	19.9	20.0
2020	7418	871	19.6	19.6
*2021	7203	855	19.1	19.2
2022			19.44	19.68

2021-2022 Analysis: Data indicates we are consistently surpassing the state in ACT in the area of Mathematics. The data set comes from NDInsights starting from 2021, as ACT no longer sends out the same reports. This data set encompasses ACT accountability according to the state and is for public viewing. The number of students is not available.

NWEA (MEASURES OF ACADEMIC PROGRESS)

Indicator 3: Students in grades 2-8 will show continuous improvement toward, or attainment of, the identified target indicating percent of students at grade level on the NWEA (MAP) Mathematics Assessment.		Making Reasonable Progress
Green	Met or Exceeded	
Yellow	Within 5%	
Red	Not Met	

Evidence:

Grad Class of	Current	Target	n	Spring 16-17	n	Spring 17-18	n	Spring 18-19	n	*Winter 19-20	n	Spring 20-21	n	Spring 21-22
2032	2	60%											885	69.2%
2031	3	60%									870	62.6%	850	68.0%
2030	4	60%						872		57.9%	822	67.4%	810	64.8%
2029	5	60%					858	54.8%	847	58.9%	791	63.8%	767	65.3%
2028	6	60%			820	56.8%	836	62.2%	814	58.0%	768	58.6%	744	58.2%
2027	7	60%	850	63.1%	818	65.5%	806	62.2%	797	61.0%	769	59.2%	748	63.1%
2026	8	60%	834	63.7%	800	61.3%	797	61.1%	783	56.3%	740	62.6%	722	59.0%

2021-2022 Analysis: We are exceeding the target in all grades by at least 3% except grades 6 and 8. We are less than 2% under in both of those grades.

***Signifies the use of winter data, while all other comparisons are spring-to-spring, due to students not being face-to-face in building during the spring 2020 COVID pandemic.**

Indicator 4: Students in grades 2-8 will show continuous improvement toward, or attainment of, the identified target indicating percent of students meeting their expected targeted growth on the NWEA (MAP) Mathematics Assessment.		Failing to Make Reasonable Progress
Green	Met or Exceeded	
Yellow	Within 5%	
Red	Not Met	

Evidence:

Grade	Target	n	Spring 18-19	n	*Winter 19-20	n	Spring 20-21	n	Spring 21-22
2	60%	997	53.0%	995	55.1%	947	62.0%	944	49.3%
3	60%	954	61.6%	991	55.9%	933	65.5%	955	61.0%
4	60%	973	58.0%	972	57.2%	938	61.5%	976	51.2%
5	60%	1038	57.7%	1002	56.9%	939	57.4%	949	55.6%
6	60%	1006	52.0%	1063	52.5%	974	55.0%	953	57.9%
7	60%	996	58.5%	1023	54.6%	990	58.6%	968	52.8%
8	60%	905	63.3%	1021	59.8%	971	53.6%	1014	59.3%

2021-2022 Analysis: We are meeting the goal in grade 3. We are within 5% in grades 5, 6, and 8. We are failing to meet the goal in grades 2, 4, and 7. We did raise the target from 55% to 60% this year. The national average is 50% of students making growth, which we are exceeding in all but grade 2.

***Signifies the use of winter data, while all other comparisons are spring-to-spring, due to students not being face-to-face in building during the spring 2020 COVID pandemic.**

Indicator 5: Each student in grades 2-8 will show continuous improvement toward, or attainment of, the identified growth target of all students categorized into subgroups on the NWEA (MAP) Mathematics Assessment.		Making Reasonable Progress
Green	Met or Exceeded	
Yellow	Within 5%	
Red	Not Met	

Evidence:

Disaggregated subgroups:	Target	n	Spring 18-19	n	*Winter 19-20	n	Spring 20-21	n	Spring 21-22
Economically Disadvantaged	50%	1512	48.9%	1753	44.5%	1229	54.5%	1448	48.4%
African American	50%	274	47.5%	359	44.3%	325	52.0%	294	53.7%
American Indian	50%	534	47.0%	612	42.3%	577	49.6%	614	46.1%
Asian	50%	75	58.7%	70	54.3%	71	56.3%	80	56.3%
Caucasian	50%	5269	56.1%	5779	47.6%	5473	64.1%	5490	56.8%
Hispanic	50%	151	51.0%	183	45.4%	173	51.5%	207	47.3%
Pacific Islander	50%					66	54.6%	68	50%
Students w/ Disabilities	50%	778	48.2%	829	41.7%	825	52.1%	892	51.9%
EL	50%	134	58.2%	187	40.6%	165	53.3%	177	56.5%
Female	50%	3105	55.6%	3422	45.6%	3261	62.5%	3319	54.8%
Male	50%	3247	54.2%	3645	48.2%	3431	61.0%	3440	55.8%
Gifted	60%	148	58.1%	95	53.8%	149	68.5%	257	67.7%

2021-2022 Analysis: All subgroups have exceeded the national average except Hispanic, Indigenous, and economically disadvantaged. These three subgroups were all within 5% of the goal.

Changes in reporting and selection of students receiving Gifted Ed support are in flux and as such “n” for Gifted Ed is not an accurate representation.

***Signifies the use of winter data, while all other comparisons are spring-to-spring, due to students not being face-to-face in building during the spring 2020 COVID pandemic.**

Indicator 6: Students will show continuous improvement toward meeting the benchmark on the PreACT in the area of Mathematics.		Baseline
Green	Met or Exceeded	
Yellow	Within 5%	
Red	Not Met	

Evidence:

Grade	Target	n	Spring 20-21
9	40%	908	48.9%
10	40%	874	22.6%

2021-2022 Analysis: 2021-2022 was our baseline year. Due to an issue with students self filling in name and student id, many tests were not identifiable which impacted numbers reported for grade 10.

CLASSROOM-BASED SCORES

Indicator 7: Each student in grades 2-8 will show continuous improvement toward, or attainment of, the identified target so that students reach a standards-based score of 2.5, or a letter grade of B in relation to Mathematics Standards.		Making Reasonable Progress, with Exception
Green	Met or Exceeded	
Yellow	Within 5%	
Red	Not Met	

Evidence:

B Letter Grade or 2.5 Standards-Based Score									
Grade	Target	n	Spring 18-19	n	Spring 19-20	n	Spring 20-21	n	Spring 21-22
K	60% <u>75%</u>	1061	70.1%	1096	55.4%	1059	75.6%	1121	84.7%
1	60% <u>75%</u>	1031	72.0%	1075	49.2%	995	73.0%	1094	85.6%
2	60% <u>65%</u>	1017	68.6%	1042	55.2%	1000	63.0%	1023	78.7%
3	60%	1002	52.3%	1037	44.6%	993	53.1%	1038	64.3%
4	60%	1026	57.0%	996	42.1%	961	49.4%	1040	62.0%
5	60%	1085	58.7%	1026	57.6%	967	58.9%	1017	69.7%
6	60% <u>65%</u>	982	63.0%	1012	65.4%	921	64.0%	897	60.4%
7	60%	950	54.2%	962	50.8%	984	44.4%	906	61.1%
8	60% <u>65%</u>	724	72.5%	744	66.5%	802	69.8%	812	63.9%

2021-2022 Analysis: We are exceeding the goal in all grade levels, and recommend increasing our goals in grades k-2, 5-6, and 8.

EXTENDED PARTICIPATION IN ELA COURSE WORK - COLLEGE AND CAREER

Indicator 8: At least 50% of all students are participating in courses that promote college and career readiness specific to mathematics beyond minimum requirements.		Making Reasonable Progress, with Exception
Green	Met or Exceeded	
Yellow	Within 5%	
Red	Not Met	

Evidence:

Grade	Target	n	Spring 17-18	n	Spring 18-19	n	Spring 19-20	n	Spring 20-21
12	50%	884	52.3	919	49.4%	929	51.8%	895	48.2%

2021-2022 Analysis: The number of students taking above and beyond did drop slightly, but we are within 5%.

Capacity Building/Recommendations

Capacity Building

Some buildings are utilizing resources for additional staff to address student learning loss evident in these scores. This includes, but is not limited to assigned building subs, additional coaching time, intervention and credit recovery courses, and additional strategists to support student learning. In addition, all schools are working on their instructional model and engaging in professional learning conversations around effective grading and assessment practices. Curriculum Guiding Coalition Teams K-12 dive into the work of guaranteed and viable curriculum including proficiency scales, pacing guides, assessments, and resources. As we continue to refine and align our instruction, grading, and assessment practices, we will see improvement in our data trajectory. A couple notable recent inputs into the area of Math include but are not limited to:

Curriculum

- Curriculum Guiding Coalition Teams
 - Accessible K-12 guaranteed and viable curriculum
 - Proficiency Scale Audits
 - K-12 Guaranteed and Viable vocabulary
- New Math State Standards are currently being rolled out by NDDPI, therefore Guiding Coalitions have previewed and many have provided feedback on the initial draft.
- Middle School TransMath proficiency scale, assessment and standards alignment
- An alternative math pathway for high school students is being offered at all three high schools, with a focus on community readiness. Alignment and curricular refinement work is in place.

Instruction

- Supplementing Tier 1 instruction with Dreambox K-8 district-wide
- Streamlining Interventions across general ed and special education departments

Professional Development Opportunities

- Guaranteed and Viable Curriculum development training
- Training on using proficiency scales as an instructional tool
- Ongoing learning and support on proficiency scale use within PLC's

Other Highlights

- K-12 Math Vocabulary Alignment with particular attention to transitions between elementary and secondary
- Public K-12 curriculum portal
- Gifted Ed team developing advanced instructional resources and activities for grades 3-5

Recommendations

1. Offer research based professional learning opportunities in the area of math.
2. Revitalize a district preK-12 math leadership team (math steering committee).
3. Guiding Coalitions will need to invest time and learning with the rollout of new standards.
4. Set new targets as presented.