



R-2 ACADEMIC ACHIEVEMENT - SCIENCE  
SUMMARY OF PROGRESS STATUS  
MARCH 2024

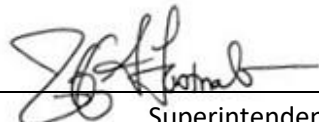
**SUPERINTENDENT CERTIFICATION**

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

- Making Reasonable Progress
- 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. The Capacity Building/Recommendations section also documents suggested changes to Operational Expectations or Results policies and/or indicators and interpretations. This report addresses five indicators of the superintendent’s responsibility regarding Academic Achievement – Science. Four of the indicators demonstrated reasonable progress; one indicator demonstrated making reasonable progress, with exception; and no indicators demonstrated failing to make reasonable progress. Reporting dates for this report are July 1, 2022 – June 30, 2023.

Signed:  \_\_\_\_\_  
Superintendent

Date: 3/25/2024

**SCHOOL BOARD ACTION**

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

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

**Summary Statement/Motion of the Board**

As I look at this report, all in all, from my perspective I feel like the district is really doing a good job. I feel like you're being a little too self-critical Dr. Fastnacht and Dr. Johnson, in your recommendation asking for reasonable progress, with exception, when I see just one and really just one small area that we're looking at making adjustments.

I agree with you President Eastgate, it's really more of a blip in my mind, it's not enough to say with exception, I think I would be more inclined to say that we're making reasonable progress.

I think as a part of the workshop that Dr. Johnson has referenced, looking at the results and whether we're asking the right question or whether those indicators are still appropriate to reflect the changing district and just looking at the amount of indicators, and all of those kinds of things, I would agree with your assessment President Eastgate and Mr. Lee. When you're looking at 4 of the 5 indicators, Making Reasonable Progress is just good math.

I agree with the sentiments that we've had so far as you look through these indicators and I would go back to indicator 3, the one with the exception, you look through the others and you look at the other data points we've have here, it's hard to really establish a pattern of what may be going on with two data points to look at. My thought is that it seems to me we're making reasonable progress.

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

Signed:   
Board President

Date: 3/25/2024

**Data Analysis**

We continue to exceed the state or make growth for ACT and NDSA in all grade levels. Last year was our first year using the PreACT. We are working through reporting issues that affected our data numbers. Grade 9 made growth from last year while grade 10 experienced a 4% drop.

We were consistently surpassing the goal in standards-based grades. The goal was increased in all grade levels except 6 and 8. The goal was met in 6 out of 9 grade levels. Grades 3 and 6 were within 2% and grade 5 experienced a 4% drop.

The state officially adopted new science standards in the fall of 2020. There was continued work in the 2022-2023 school year around unpacking standards, vertical and curriculum alignment, reviewing and revising proficiency scales, and a guaranteed and viable curriculum. Guiding coalitions engage in collaboration around best practice for delivering core instruction. Prioritized standards have supported the proficiency scales and their connection to instruction and assessment.

We have seen an increase in the number of students taking additional science classes. We are working on increasing opportunities for students to engage in science electives across buildings, including the Career Academy.

While our data visually shows growth in most areas, BPS continues to refine our instructional practices and align our instruction, grading, and assessment practices.

**R-2.1 Academic Achievement - Science**

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

**Each Student Will:**

<b>2.1</b> Achieve targeted growth and proficiency in the following disciplines: ELA Mathematics Science Social Studies	<b>Making Reasonable          Progress, with          Exception</b>
---	---

**2.1 Science****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 PreACT 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.
- **“n”** equals number of students.
- **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.

ACT				
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 for College Readiness				
ACT	18	22	23	22
Minimum Expected Percentile for College Readiness				
	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**

<b>Indicator 1:</b> Students in grades 4, 8, and 10 who are Advanced or Proficient on the NDSA Science Section will meet or exceed the state performance.		<b>Making Reasonable Progress</b>
Green	Met or Increased	
Blue	Flat or a Decrease Under 2%	
Yellow	Decrease of 2% to 4.9%	
Red	Decrease of 5% or More	

**Evidence:**

	2019-2020		*2020-2021		2021-2022		2022-2023	
	State	District	State	District	State	District	State	District
Grade 4	COVID		41%	44%	38%	38%	38%	41%
Grade 8			51%	44%	48%	47%	48%	48%
Grade 10			50%	52%	47%	54%	49%	50%

**2022-2023 Analysis:** We are consistently meeting or exceeding the state average in the area of Science for NDSA. Grades 4 and 8 saw growth in comparison from last year, while grade 10 decreased 4%.

\*The science assessment was aligned to the newly adopted standards and the first administration was in spring 2020.

<b>Indicator 2:</b> The district mean scores will meet or exceed the state mean score on the ACT in the area of Science.		<b>Making Reasonable Progress</b>
Green	Met or Increased	
Blue	Flat or a Decrease Under 2%	
Yellow	Decrease of 2% to 4.9%	
Red	Decrease of 5% or More	

**Evidence:**

Year	Number of Students Tested		Science	
	State	District	State	District
2016	7379	849	20.7	20.9
2017	7399	834	20.6	20.8
2018	7282	827	20.5	20.7
2019	7451	845	20.2	20.7
2020	7418	871	20.1	20.5
2021	7203	855	20.6	21.4
2022			20.0	20.6
2023			20.4	21.2

**2022-2023 Analysis:** We continue to exceed the state average in the Science portion of the ACT.

**PreACT DATA**

<b>Indicator 3:</b> Students will show continuous improvement toward meeting the benchmark indicated target on the PreACT in the area of Science.		<b>Making Progress, with Exception</b>
Green	Met or Increased	
Blue	Flat or a Decrease Under 2%	
Yellow	Decrease of 2% to 4.9%	
Red	Decrease of 5% or More	

**Evidence:**

Grade	Target	n	Spring 21-22	n	Spring 22-23
9	TBD	1010	41%	1069	46%
10	TBD	907	44%	955	40%

**2022-2023 Analysis:** 2021-2022 was our baseline year. 9th grade has increased percent of students meeting while 10th has dropped in Science.

Due to an error in a reporting system, scores and numbers have shifted slightly for the 2021-2022 year.

**CLASSROOM-BASED SCORES**

<b>Indicator 4:</b> Each student in grades K-8 will show continuous improvement toward, or attainment of, an identified target as students reach a standards-based score of 2.5, or a letter grade of B in relation to Science Standards.		<b>Making Reasonable Progress</b>
Green	Met or Increased	
Blue	Flat or a Decrease Under 2%	
Yellow	Decrease of 2% to 4.9%	
Red	Decrease of 5% or More	

**Evidence:**

B Letter Grade or 2.5 Standards-Based Score									
Grade	Target*	n	Spring 19-20	n	Spring 20-21	n	Spring 21-22	n	Spring 22-23
K	90%	974	85.7%	960	94.3%	1112	95.2%	1045	94.0%
1	90%	964	91.2%	969	96.2%	1030	95.6%	1107	96.1%
2	90%	954	98.0%	943	95.9%	989	92.7%	1044	98.6%
3	90%	951	85.3%	919	88.0%	958	89.6%	986	88.7%
4	85%	955	88.3%	957	85.4%	1034	83.6%	1028	85.4%
5	85%	1011	79.2%	972	80.3%	1021	83.3%	1054	79.6%
6	70%	1112	66.5%	1038	<b>60.5%</b>	1008	68.2%	1036	67.5%
7	80%	1089	75.9%	1128	74.8%	1059	77.6%	1042	78.2%
8	70%	1082	71.5%	1072	65.8%	1129	69.5%	1068	71.4%

**2022-2023 Analysis:** The goal was met in 6 out of 9 grade levels, two grade levels were within 2%, and one grade dropped less than 5%.

\*In 2022-2023 targets for grades K-5 were changed from 80%, grade 7 was changed from 70%, and grades 6 and 8 remained the same.



**EXTENDED PARTICIPATION IN SCIENCE COURSE WORK – COLLEGE AND CAREER**

<b>Indicator 5:</b> At least 40% of all students are participating in courses that promote college and career readiness specific to science beyond minimum requirements.		<b>Making Reasonable Progress</b>
Green	Met or Increased	
Blue	Flat or a Decrease Under 2%	
Yellow	Decrease of 2% to 4.9%	
Red	Decrease of 5% or More	

**Evidence:**

Grade	Target	n	Spring 19-20	n	Spring 20-21	n	Spring 21-22	n	Spring 22-23
12	40%	919	36.8%	929	41.9%	895	35.9%	951	37.1%

**2022-2023 Analysis:** The number of students taking above and beyond minimum requirements in Science increased by just under 2%.

There was a small discrepancy in the report, which has been fixed. Numbers were adjusted to reflect, differences were minimal.

### **Capacity Building/Recommendations**

#### **Capacity Building**

The District has continued to work on unpacking standards, vertical and curriculum alignment, creating proficiency scales, and ensuring a guaranteed and viable curriculum since the adoption of new science standards by ND DPI in the fall of 2020. As we establish our prioritized learning objectives and pacing, we also identify resources and strategies to support effective teaching and learning within our classrooms. Continued inputs in this area include:

#### **Curriculum (K – 5)**

- Acquired and maintain Mystery Pack resources for all sections K-5
- Provided Mystery Science training for all new K-5 teachers
- Created Prioritized Vocabulary relating to Priority Standards
- Prioritized Pacing of unit instruction review

#### **Curriculum- (6 – 12)**

- Essential vocabulary workshop for Physical Science, Biology, and Chemistry prioritized standards
- Forensic Science course ongoing revisions to unit outlines and learning targets
- District PLC time for course alike and dual credit courses to refine their alignment
- Middle school supplemental resources curated to support teaching the prioritized standards
- Middle school NDSA data reviews and assessment examples
- Science Core Guiding Coalitions shared lab activities aligned to learning targets

#### **Professional Development Opportunities**

- Guaranteed and Viable Curriculum review of course outlines
- K-12 essential vocabulary prioritized for core-required courses
- Proficiency Scale audit process
- Grading practices and feedback strategies shared among middle school guiding coalition
- Exploring student centered learning activities with local organization
- BPS teacher-led professional development

#### **Recommendations**

1. In the guiding coalitions we believe that we should continue to examine the results from the data to identify different science standards and strands as areas of focus to grow our performance. We will continue to revisit and align proficiency scales and the learning progressions within them to better meet the needs of all learners.
2. Consideration of classroom-based measure in lieu of standards no longer being used at the middle level.