

North Dakota State Assessment System

Compilation of NDSA and NDAA scores from 2020-2021
Mathematics and English Language Arts

February 23rd, 2022
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State-wide Assessments

- **North Dakota State Assessment (NDSA)**
 - Math and ELA - grades 3-8, 10
 - Science – grades 4, 8, 10
 - ACT (grade 11) can be used in lieu of NDSA Math and ELA grade 10
- **North Dakota Alternate Assessment (NDAA)**
 - Students with the most significant cognitive disabilities - (1%)
 - Same grade layout as NDSA (mimics peers)
- **ACCESS 2.0**
 - English language proficiency assessment
 - K-12
- **National Assessment of Educational Progress (NAEP)**
 - Biannual assessment in 4th and 8th grade, Math and Reading
 - Sample of students – around 200 schools in 2021-2022

Instrument Used

- NDSA: The main instrument used to assess students in a summative manner is developed in partnership with Cambium Assessment, Inc (CAI). It is an online, computer-adaptive test.
- Test blueprints are constructed from ND academic standards.
- Typically, after initial administration, a standard setting and content/bias review process occurs (ND educators). Cut scores are developed. Then, a 3rd party alignment study occurs to ensure test item pool represents ND standards (including depth and breadth).
- Content and Bias reviews occur yearly. Validity and Reliability reports generated each year, are a part of Annual Technical Report (7 volumes).

North Dakota Math Grade 5 Computer Adaptive Blueprint

Reporting Category	Standards Assessed	DOK	Approximate Portion of Test 36 – 38 items
Operations and Algebraic Thinking	5.OA.1	2,3	25-29%
	5.OA.2		
	5.OA.3**		
	5.OA.4		
Number and Operations in Base Ten	5.NBT.1	1,2	22-24%
	5.NBT.2**		
	5.NBT.3		
	5.NBT.4		
	5.NBT.5	1,2,3	
	5.NBT.6**		
	5.NBT.7**		
Number and Operations - Fractions	5.NF.1	2,3	22-24%
	5.NF.2*		
	5.NF.3*	1,2,3	
	5.NF.4**		
	5.NF.5**		
	5.NF.6*		
5.NF.7*			
Measurement, Data, and Geometry	5.MD.1	1,2	25-26%
	5.MD.2*	1,2,3	
	5.MD.3	1,2,3	
	5.MD.4		
	5.MD.5*		
	5.G.1	1,2,3	
	5.G.2*		
	5.G.3**	2,3	
5.G.4			

Domain: Operations and Algebraic Thinking

Cluster: Write and interpret numerical expressions.

Code	Standards
5.OA.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
5.OA.2	Write simple expressions that record calculations with numbers. Interpret numerical expressions without evaluating them.

Cluster: Analyze patterns and relationships.

Code	Standards
5.OA.3	Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns. Graph the ordered pairs on a coordinate plane. Use the graph to verify relationships.

Cluster: Gain familiarity with factors and multiples.

Code	Standards
5.OA.4	Find all factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

NDSA Cut Scores

- Proficient levels or Cut Scores are set during the Standard Setting process after first administration.
- Vertically aligned through grade levels.
- Used in development of the achievement proficiency charts that can be found on ND Insights.

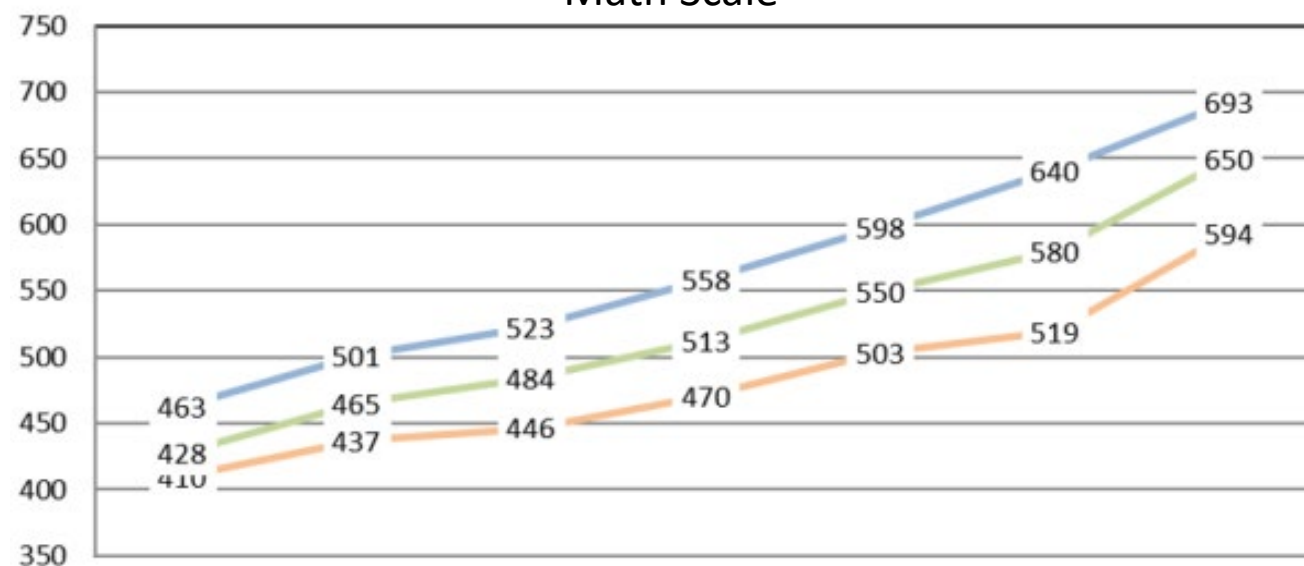
Mathematics NDSA Cut Scores

Achievement Level	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
Advanced	463	501	523	558	598	640	693
Proficient	428	465	484	513	550	580	650
Partially Proficient	410	437	446	470	503	519	594

English Language Arts NDSA Cut Scores

Achievement Level	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 10
Advanced	621	639	661	671	680	702	713
Proficient	585	600	622	638	641	650	667
Partially Proficient	560	572	595	610	611	616	627

Math Scale



NDSA Participation Rates

- ELA 96%
 - 56,661 students tested
- Math 96%
 - 56,904 students tested
- Goal is to test 95% overall, grade level, and in each demographic or sub-group.
- Large disruptions create need to look at participation rates.

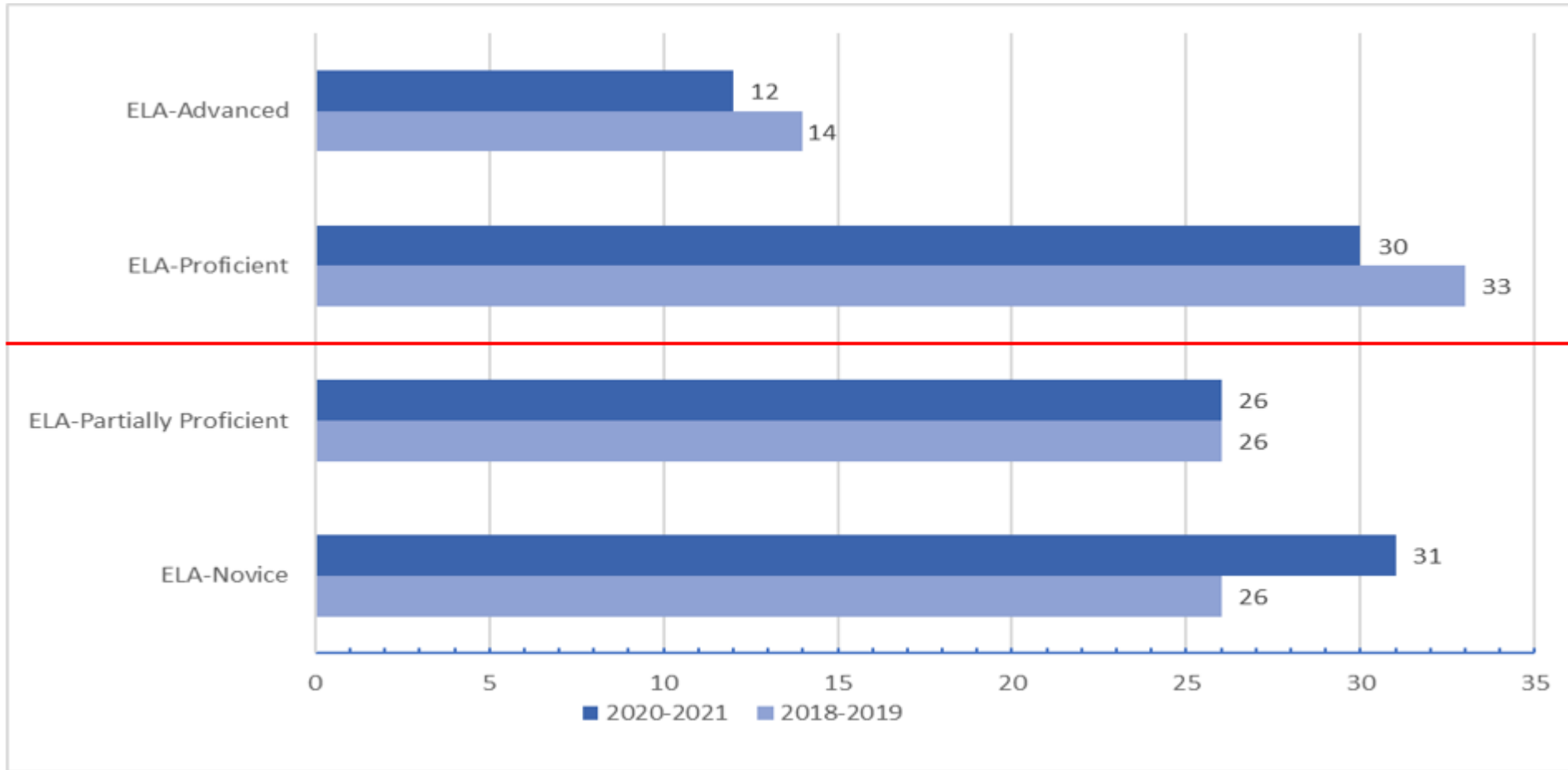
ELA Participation

Low Income	94% (17,469 Total)
IEP (student with disabilities)	92% (7,931 Total)
Migrant	85.0% to 89.0%
Foster Care	92% (321 Total)
Military	98% (1,056 Total)
Homeless	90% (605 Total)
Male	96% (28,959 Total)
Native Hawaiian or Pacific Islander	93% (266 Total)
English Learner	93% (2,016 Total)
IEP - Emotional Disturbance	87% (718 Total)
Female	96% (27,702 Total)
White	97% (43,116 Total)
Native American	92% (5,474 Total)
Black	94% (3,536 Total)
Hispanic	93% (3,130 Total)
Asian American	95% (1,139 Total)

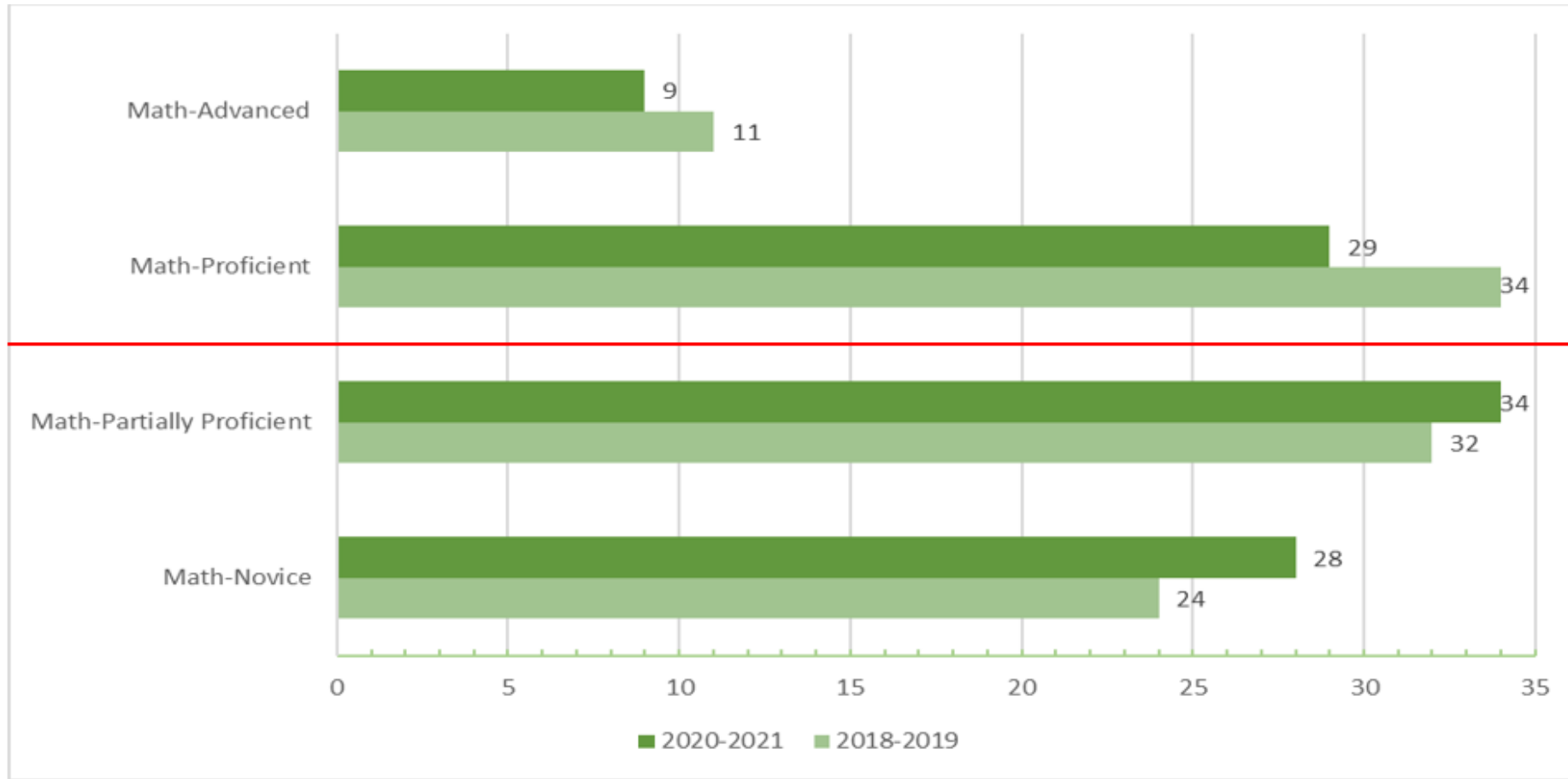
Math Participation

Low Income	94% (17,605 Total)
IEP (student with disabilities)	92% (7,992 Total)
Migrant	85.0% to 89.0%
Foster Care	93% (324 Total)
Military	98% (1,058 Total)
Homeless	91% (613 Total)
Male	96% (29,104 Total)
Native Hawaiian or Pacific Islander	93% (266 Total)
English Learner	95% (2,072 Total)
IEP - Emotional Disturbance	88% (729 Total)
Female	96% (27,800 Total)
White	97% (43,232 Total)
Native American	93% (5,538 Total)
Black	94% (3,562 Total)
Hispanic	94% (3,161 Total)
Asian American	95% (1,145 Total)

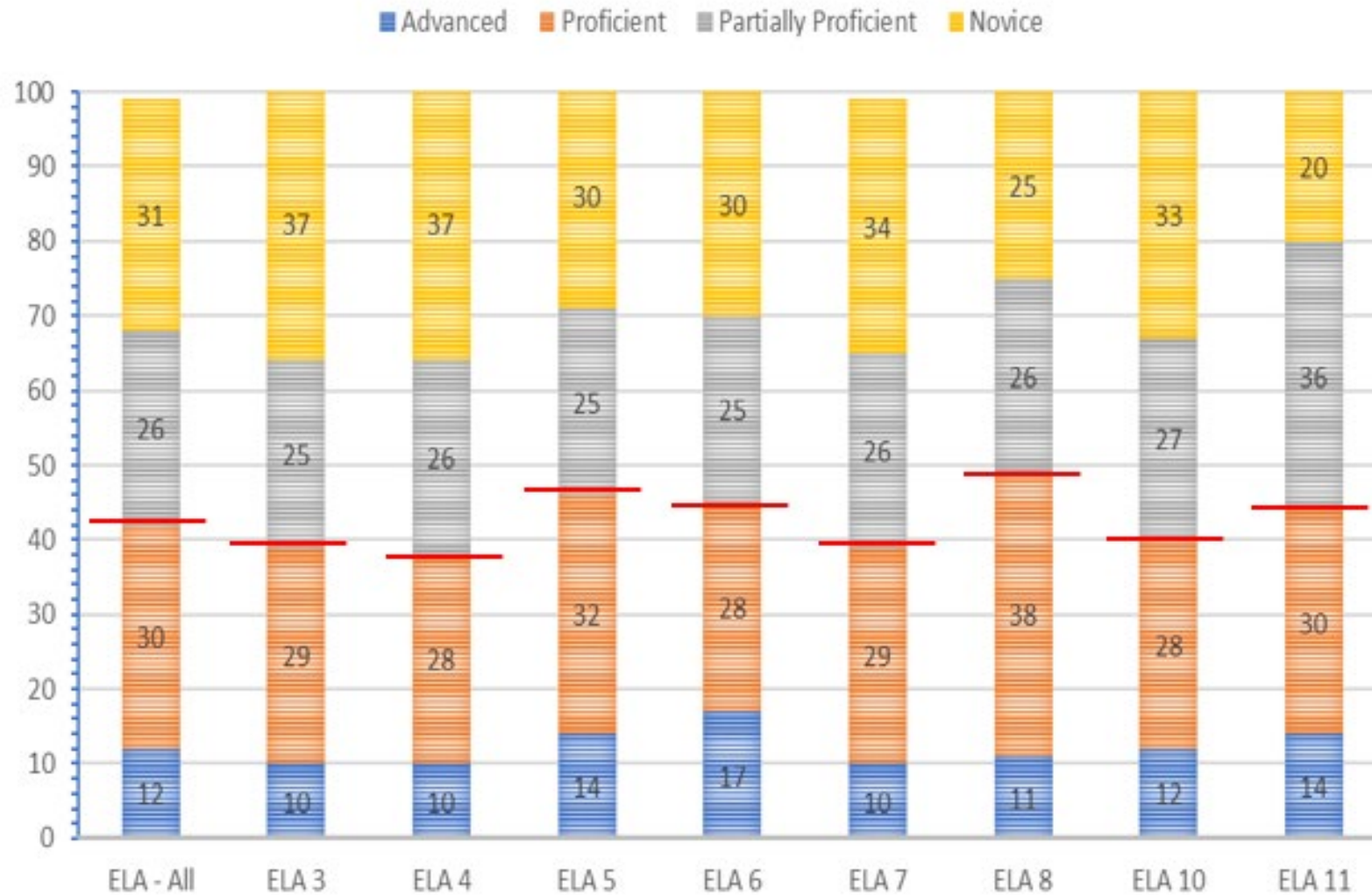
Achievement – Overall ELA



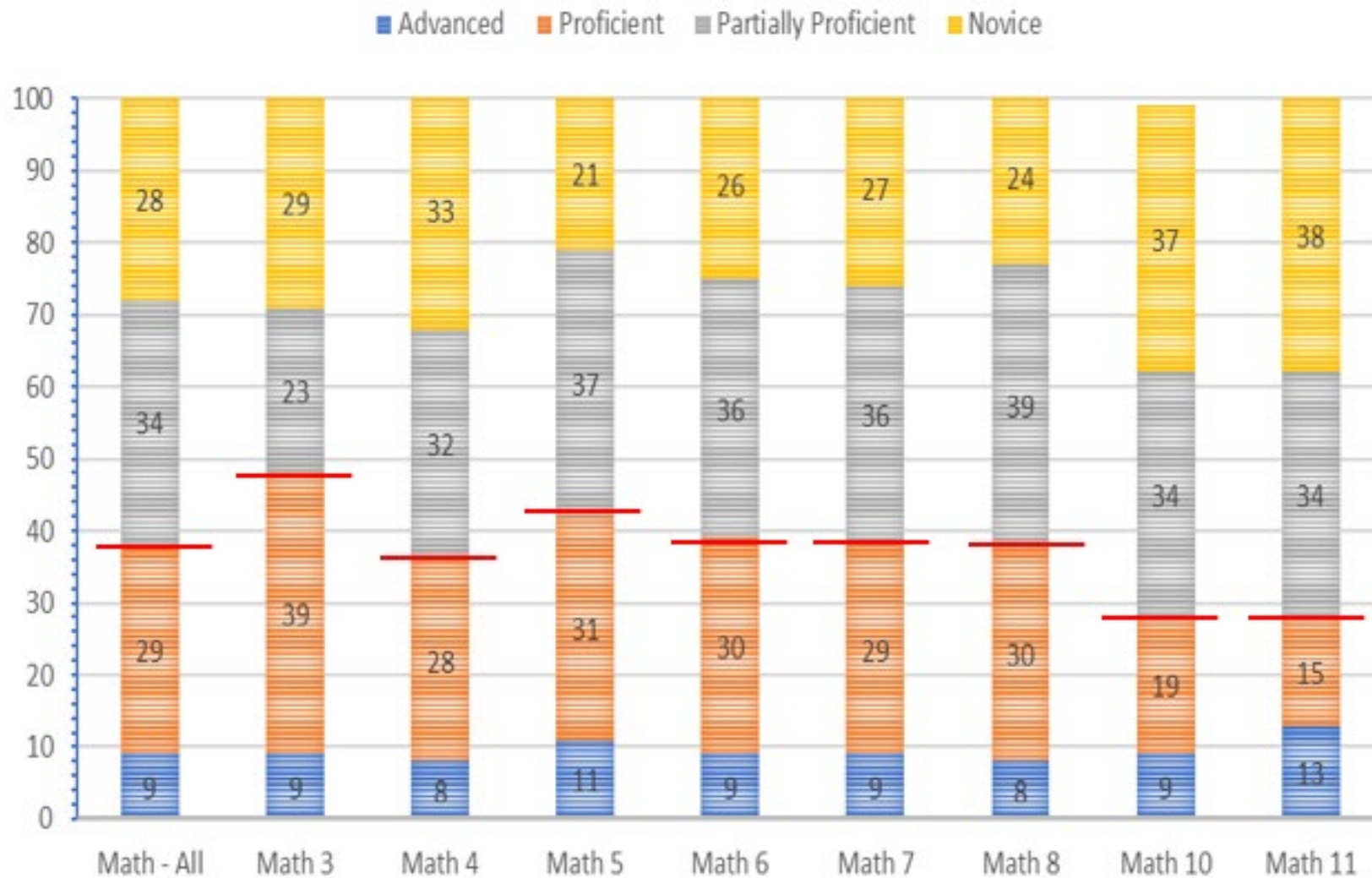
Achievement – Overall Math



ELA ACHIEVEMENT (COMBINED) 20-21



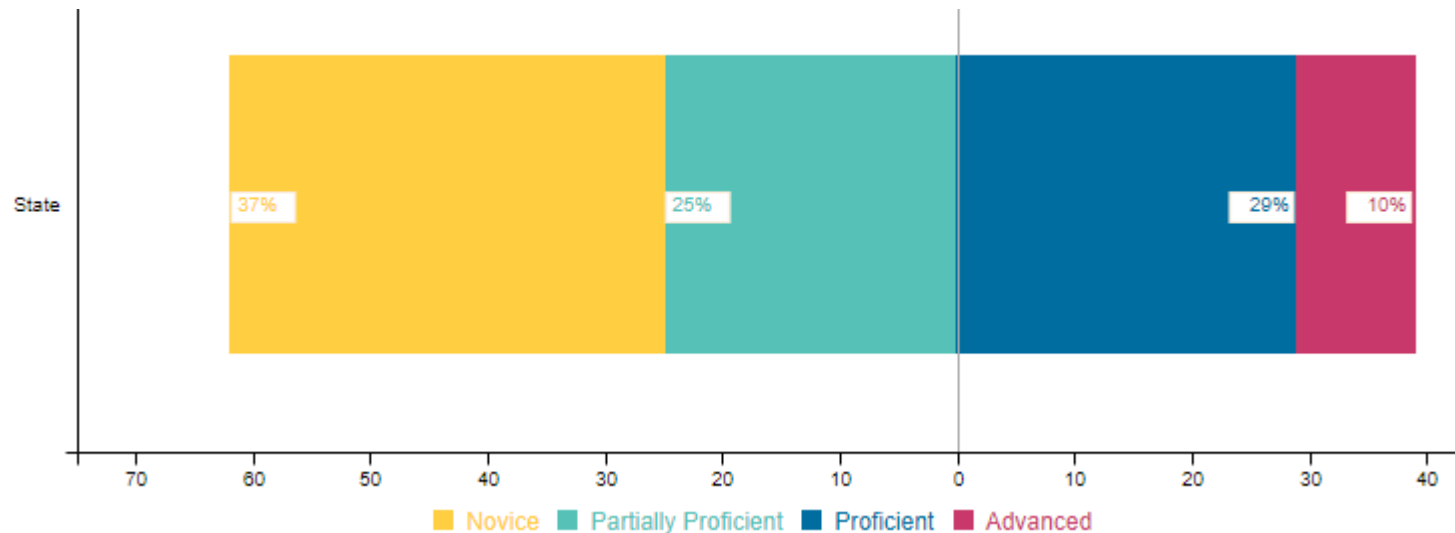
MATH ACHIEVEMENT (COMBINED) 20-21



Grade 3: ELA Achievement

ELA-3-Combined	Novice	Partially Proficient	Proficient	Advanced
Black	53%	24%	19%	4%
Hispanic	53%	21%	22%	4%
Native American	58%	22%	17%	3%
White	31%	26%	31%	11%
EL	59%	26%	14%	1%
IEP-Disability	61%	21%	15%	3%
Low Income	52%	25%	19%	4%

P + A
23%
26%
20%
42%
15%
18%
23%

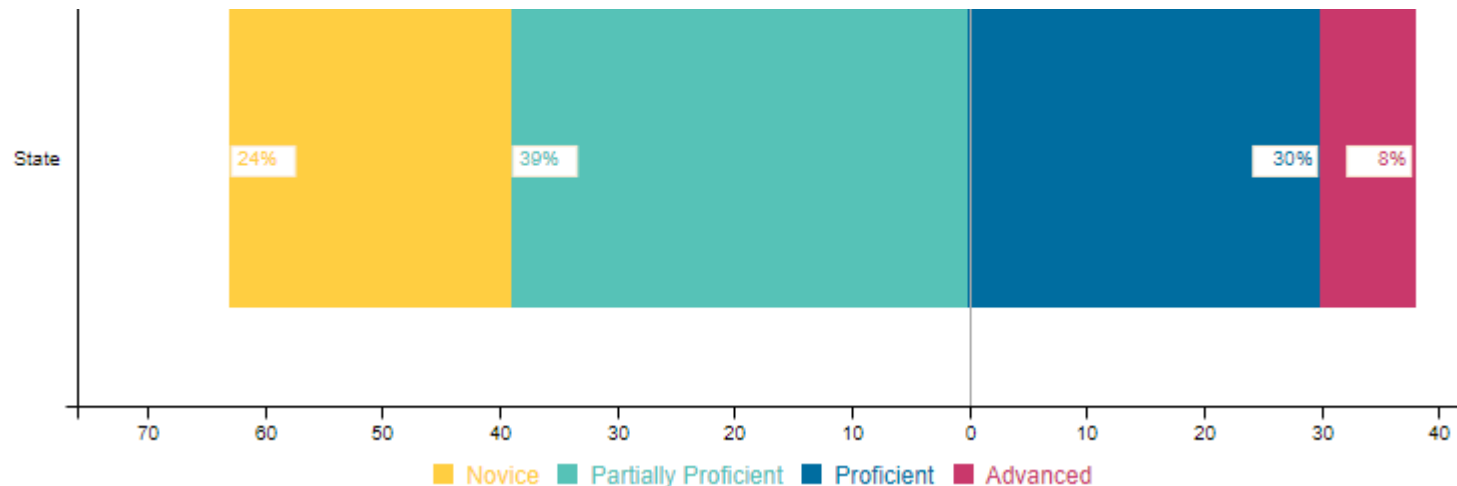


39%

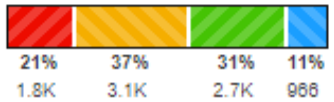
Grade 8: Math Achievement

Math-8-Combined	Novice	Partially Proficient	Proficient	Advanced
Black	45%	37%	14%	4%
Hispanic	39%	39%	20%	2%
Native American	50%	36%	12%	2%
White	16%	39%	34%	9%
EL	67%	25%	8%	0%
IEP-Disability	63%	27%	9%	1%
Low Income	40%	39%	19%	3%

P + A
18%
22%
14%
43%
8%
10%
22%



38%

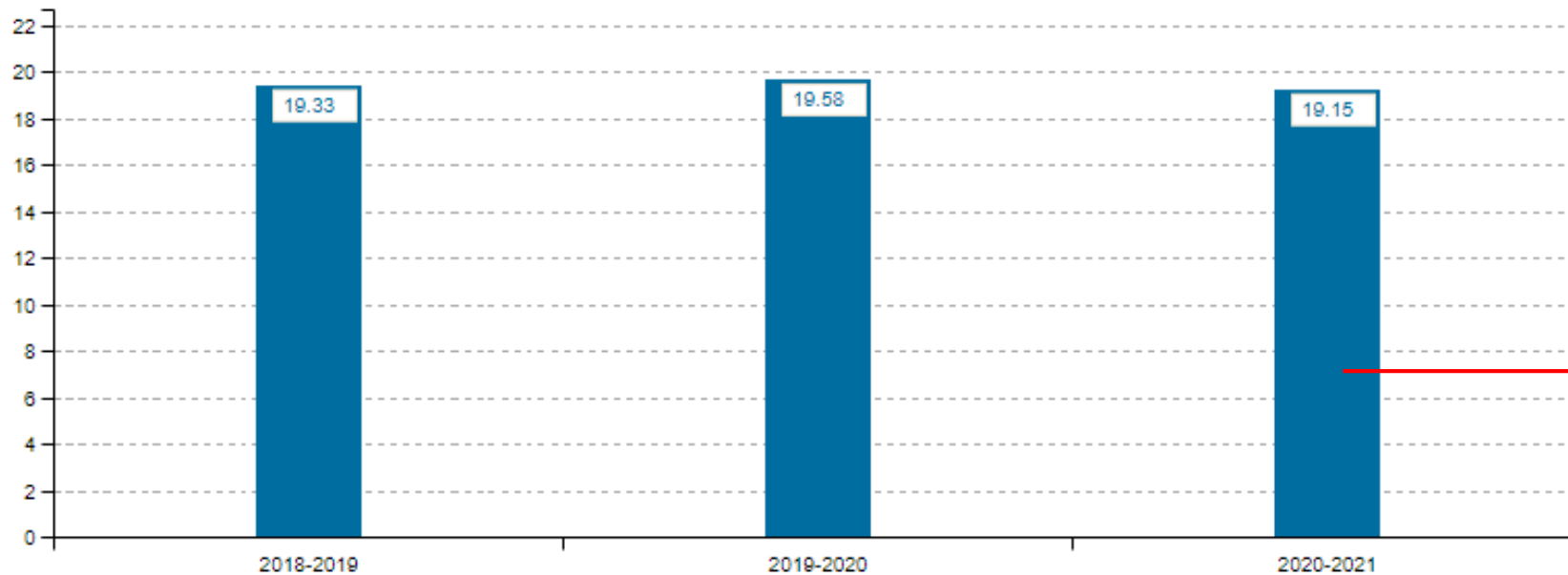
School	Total	Total				Measurement, Data and Geometry	Modeling and Problem Solving	Number and Operations - Fractions	Number and Operations in Base Ten	Operations and Algebraic Thinking
		Student Count	Average Scale Score	Performance Distribution		Percent Proficient				
State		8540	475 <i>i</i>	 <p>Percent Count: 21% (1.8K), 37% (3.1K), 31% (2.7K), 11% (986)</p>		43%				

Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.

Operations and Algebraic Thinking	Operations and Algebraic Thinking									
	Average Reporting Category Scale Score	Performance Distribution	Operations and Algebraic Thinking							
			5.OA 5.OA.A 5.OA.A.1 ⓘ		5.OA 5.OA.A 5.OA.A.2 ⓘ		5.OA 5.OA.B 5.OA.B.3 ⓘ		5.OA.4 ⓘ	
			Proficient? ⓘ	Weak or Strong? ⓘ	Proficient? ⓘ	Weak or Strong? ⓘ	Proficient? ⓘ	Weak or Strong? ⓘ	Proficient? ⓘ	Weak or Strong? ⓘ
	470 ± 1 ⓘ	<div><div></div><div></div><div></div></div> <div>Percent Count 28% 2.4K 56% 4.8K 16% 1.3K</div>	✖	—	✖	—	✖	+	✖	+

ACT – Composite Performance

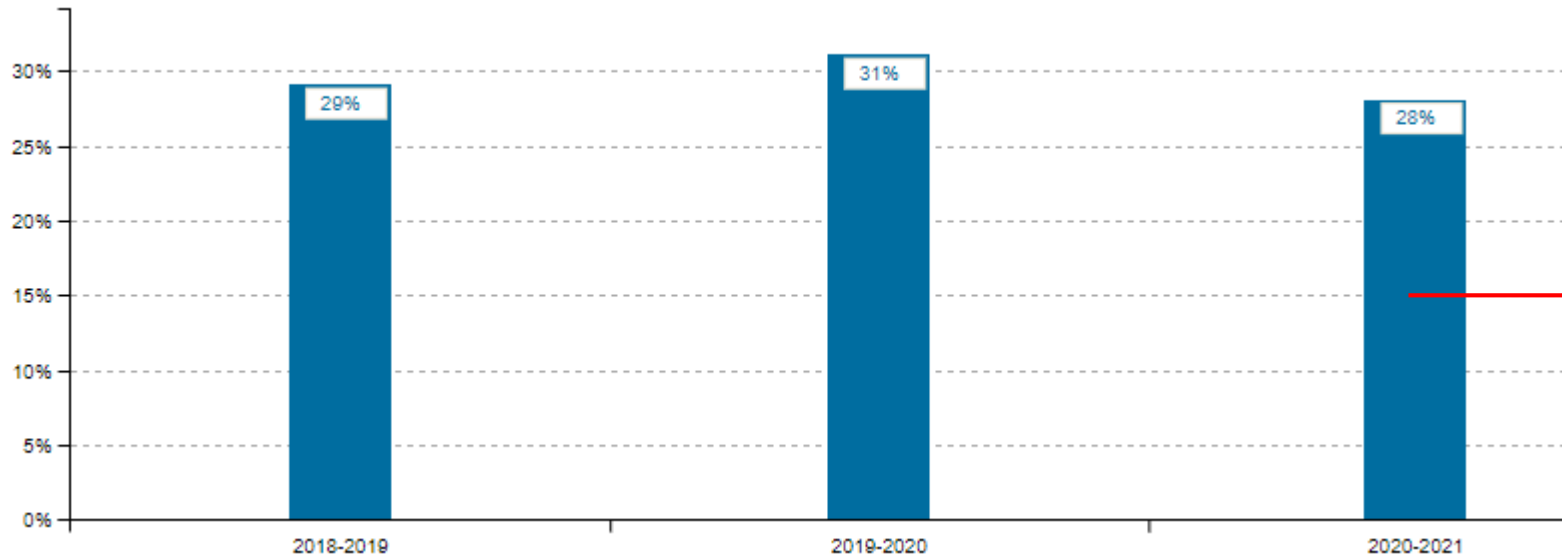
This is the average score of students taking all test components.



Asian American	20.07
Black	16.65
CTE Concentrators	18.41
Female	19.41
Hispanic	17.12
Male	18.88
Native American	16.31
Native Hawaiian or Pacific Islander	19.45
White	19.62

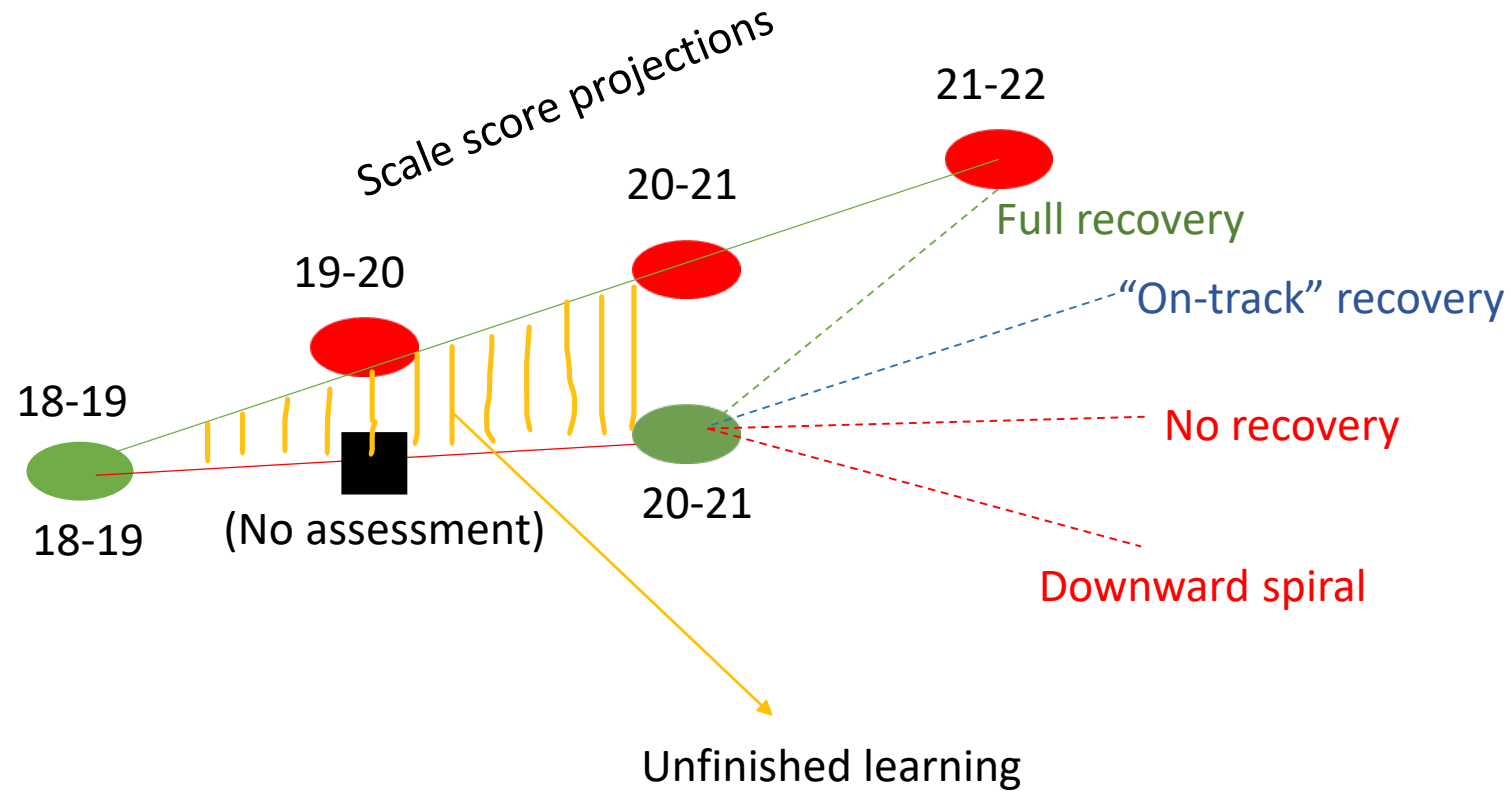
ACT – Composite Benchmark

This is the percent of test takers who met a minimum composite benchmark of 22.



Asian American	35.0% to 39.0%
Black	11%
CTE Concentrators	24%
Female	29%
Hispanic	15%
Male	27%
Native American	10%
Native Hawaiian or Pacific Islander	30.5% to 39.5%
White	31%

Looking forward – measuring recovery



Closing and QA

- The NDSA is one instrument/tool used to measure where students in ND are academically. It is always suggested to use as many instruments/tools, inputs, or datasets as possible when analyzing student academic standing and making strategic decisions. As one moves down levels from state to district or district to school, or even from overall to subgroups, it is possible different patterns or trends reveal themselves.
- We have experienced significant drop in achievement proficiency levels and are now presented with an opportunity to make a significant recovery.
- Questions?
- Thank you!