Predicting proficiency on AK STAR summative based on NWEA growth scores

AK STAR SYSTEM

In the 2021–2022 school year, the Alaska Department of Education and Early Development (DEED) began administering a new assessment system for grades 3–9 in English language arts (ELA) and mathematics, the Alaska System of Academic Readiness (AK STAR). This balanced approach connects fall or winter MAP® Growth™ interim assessments to the spring AK STAR, which is made up of a grade-specific summative component combined with a growth component.

During the spring 2023 administration, students across Alaska took the MAP Growth standalone assessment in the fall and winter and AK STAR in the spring. The spring AK STAR includes both a summative component and a MAP Growth component, producing a summative proficiency score, an overall RIT score, and instructional area RIT scores. A linking study was conducted to produce RIT cut scores that correspond to the state summative achievement levels. The MAP Growth reports include a RIT score along

THE LINKING STUDY allows Alaskan educators to confidently **USE MAP GROWTH RIT SCORES** throughout the year **TO PREDICT** their students' **PERFORMANCE LEVELS** on the state summative assessment.

with a projected proficiency score based on the results of this linking study to help inform instruction throughout the year.

THE RESULTS

NWEA confirmed that the MAP Growth interim and AK STAR summative assessments were constructed based on the same or similar set of content standards to warrant a connection. The link between the two tests was confirmed by calculating the relationship between the MAP Growth and AK STAR summative test scores. A high, positive correlation (e.g., ≥ 0.70) shows that students who perform well on one assessment also tend to perform well on the other, and vice versa, with 1.00 being a perfect positive correlation. Additionally, the classification accuracy between the MAP Growth RIT score and AK STAR summative test scores from Spring 2023, shown below in Figure 1, are consistent with our linking study expectations, indicating that MAP Growth is a good assessment for predicting performance on the AK STAR spring summative assessment.

Figure 1 ▶ Correlations between MAP Growth and AK STAR Scores
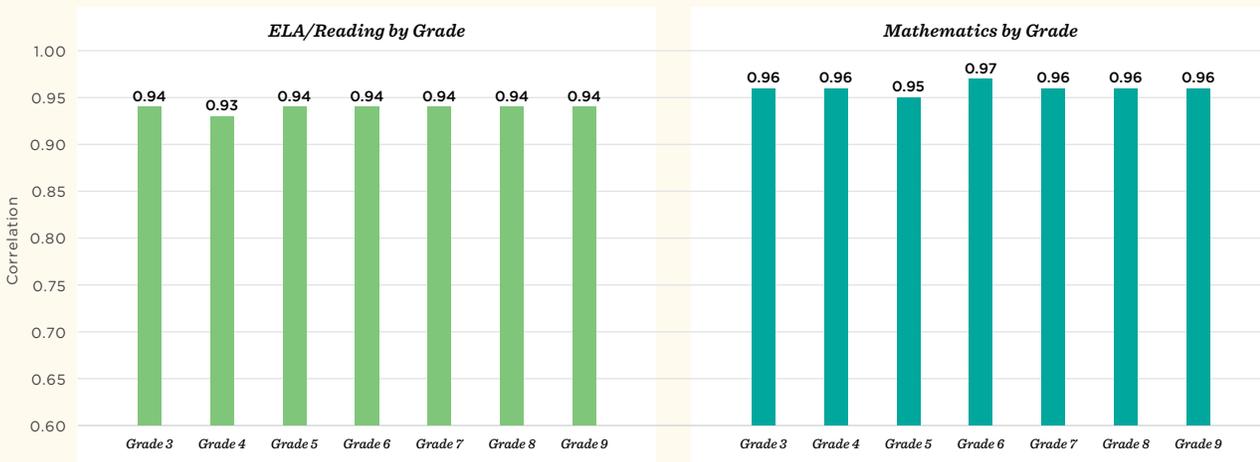
ELA/Reading by Grade

Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
0.94	0.93	0.94	0.94	0.94	0.94	0.94

Mathematics by Grade

Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9
0.96	0.96	0.95	0.97	0.96	0.96	0.96

AK STAR
SUMMATIVE ELA SCORE RANGES

Needs Support	Approaching Proficient	Proficient	Advanced
1410–1567	1568–1588	1589–1611	1612–1750

map GROWTH
READING RIT SCORE AND PERCENTILE RANGES

Needs Support		Approaching Proficient		Proficient		Advanced	
RIT	PERCENTILE	RIT	PERCENTILE	RIT	PERCENTILE	RIT	PERCENTILE
FALL							
100–185	1–25	186–198	26–55	199–212	56–82	213–350	83–99
WINTER							
100–192	1–27	193–204	28–55	205–216	56–80	217–350	81–99
SPRING							
100–195	1–28	196–206	29–54	207–218	55–80	219–350	81–99

Note: The full table (grades 2–9) for ELA/Reading cut scores can be found on page 16 of the linking study. Math cut scores can be found on page 18 of the linking study. Additionally, the probability of the proficiency projections can be found in the tables starting on page 19 of the linking study.

USING THE LINKING STUDY

This linking study will allow Alaska educators to use MAP Growth RIT scores throughout the year to predict their students' performance levels on the AK STAR summative assessment. Through the linking study NWEA produced RIT cut scores that correspond to the AK STAR summative achievement levels (Needs Support, Approaching Proficient, Proficient, Advanced). A cut score is the minimum score a student must get on a test to be placed in a certain achievement level. The linking study provides RIT cut scores for the fall, winter, and spring MAP Growth administrations that correspond to the AK STAR achievement levels for each subject and grade.

Educators can use these cut scores to determine whether students are on track for proficiency on the state assessment, identifying students early in the school year that are at risk of not meeting state proficiency standards and providing targeted instruction to improve academic outcomes.

Table 1 provides information on the cut scores for the AK STAR English Language arts (ELA) fourth grade assessment and the corresponding MAP Growth RIT score and percentile projected proficiency ranges. Based on this table, we know that:

• A student with a fall MAP Growth RIT score of 199 or above would be projected as being "Proficient" or "Advanced" on the spring AK STAR summative assessment. Students with RIT scores between 199 and 212 will be projected as "Proficient" and students with RIT scores between 213 and 350 will be projected as "Advanced."

map GROWTH + AK STAR

.... Key Findings ....

• The spring 2023 MAP Growth and AK STAR assessment linking study demonstrated that spring RIT scores are highly accurate at predicting students' proficiency on the AK STAR summative assessment.

• The prediction accuracy of MAP Growth will probably be slightly lower if using fall or winter RIT scores.

• Overall, a MAP Growth projected proficiency will be fairly accurate for most students, but it will not perfectly match the actual achievement level on AK STAR for every student.

AK STAR | **map GROWTH**
ALASKA SYSTEM OF ACADEMIC READINESS

Figure 2 ▸ Student scenario for MAP Growth projected proficiency and AK STAR scoring

> **I AM A FOURTH GRADER TAKING MAP GROWTH AND THE AK STAR ELA TESTS.**
> For me to be at the "Proficient level" on the AK STAR spring summative test, I need to get a 1589 or higher. My MAP Growth RIT score and projected proficiency levels do not guarantee my spring AK STAR achievement level. Here is how I progressed during the school year.
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> • • •

STUDENT	**map** GROWTH	**map** GROWTH	AK STAR
Student Assessment Scores	*Fall Adaptive Growth Assessment*	*Winter Adaptive Growth Assessment*	*Spring Adaptive Summative Assessment*
+ MY RIT SCORES	207	204	208
+ MY AK STAR SCORE	N/A	N/A	1592
+ MY PROFICIENCY LEVEL	Projected Proficient	Projected Approaching Proficient	Proficient

> • • •
>
> In the fall, I was projected to be "Proficient" but in the winter I missed several school days. Due to this I was projected as "Approaching Proficient" on my winter MAP Growth test. My teacher helped me catch up on missing lessons. **IN THE SPRING, I SCORED A 1592 ON THE AK STAR AND WAS AT THE "PROFICIENT" LEVEL.**

- Students with a RIT score of 198 or below on the fall MAP Growth assessment would not be projected as being proficient on the AK STAR summative assessment. Students with RIT scores between 186 and 198 will be projected as "Approaching Proficient" and students with RIT scores between 100 and 185 will be projected as "Needs Support".

- Students with RIT scores above 205 in winter would be projected as "Proficient" or "Advanced". Students with RIT scores below 204 in the winter, respectively, would be projected as "Approaching Proficient" or "Needs Support".

- To learn more about using the AK STAR and MAP Growth linking study and projected proficiency scores to inform instructional planning decisions, please be on the look out for future AK DEED Professional Learning sessions.

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