



i-Ready's New

Student Growth Model



Introduction

Beginning with the 2018–2019 school year, Curriculum Associates will introduce a new approach to measuring student growth in *i-Ready*. The new approach is based on Curriculum Associates' longitudinal, multi-year research into the growth of millions of students. Our research has confirmed what educators have long observed: not all students grow at the same rate nor should all students have the same growth goals. Based on this research, *i-Ready*'s new growth model will provide differentiated growth benchmarks that will differ based on students' performance on the beginning-of-year *i-Ready Diagnostic*. The new model will also provide two complementary measures of growth:

Stretch Growth marks the amount of growth that a student should target to put him or her on a path to attaining grade-level proficiency.

Typical Growth marks the annual growth (from fall to spring) for an average student taking the *i-Ready Diagnostic*.

The goal of this new approach is to provide educators with better benchmarks for understanding students' growth and a greater understanding of the growth needed to change student proficiency over time.

i-Ready's Current Growth Model

The current *i-Ready* growth model uses gain scores to measure student growth on the *i-Ready Diagnostic*. The gain score is the difference between a student's first and last Diagnostic scale scores and provides a measure of student growth over time. This model is well suited to measuring gains at the class, school, or district level with aggregate growth calculated as the average of gains made by individual students. This model has been approved as a growth measure for accountability purposes in multiple states and districts.

To put student gains in context, *i-Ready* currently provides a single recommended growth target for each grade and subject, regardless of the student's Diagnostic score. Student progress toward these grade-specific targets can be evaluated in the *i-Ready* program at both the student and aggregate levels. These targets are criterion-referenced, providing a benchmark for satisfactory growth within one academic year. In addition, *i-Ready* provides median (50th percentile) growth for each grade as a reference point. *i-Ready*'s new growth model will still use gain scores to measure growth but will enhance existing benchmarks by supplying added context and specificity.

Why We Are Changing the Model

The model is changing to include key improvements requested by educators and users of the *i-Ready Diagnostic*. Through hundreds of conversations with educators coupled with the benefit of extensive longitudinal research, we know we can provide better, more tailored student growth reporting. The new *i-Ready* student growth model makes three critical improvements requested by educators:

- **Greater differentiation**

Research shows that in many cases, students who start at different placement levels grow at different rates. While the current model provides a single, uniform target and median for each grade level and subject, the new model accounts for differences in a student's starting placement level. Both of the benchmarks provided in the new model—Stretch Growth and Typical Growth—are specific to students' beginning-of-year *i-Ready* placement levels.

- **Provides a path to grade-level proficiency**

Stretch Growth marks the growth required to put each student on a pathway to proficiency. It is based on observations of students who started below grade level and increased their scores to achieve grade-level proficiency over time. For students on or above grade level at the beginning of the year, Stretch Growth is based on students who later attained late or above-grade level placements. These new recommendations improve on the current grade-level Recommended Targets by providing a clearer path to proficiency for students at each placement level.

- **Provides a meaningful comparison across groups**

Educators often need to compare the growth rates of classes or schools and identify which groups experience below-average growth vs. those that achieve greater than average growth. Typical Growth provides a better way to compare student groups to *i-Ready Diagnostic* test takers nationally. Unlike the current model's grade-level growth medians, Typical Growth is specific to each grade and placement level. This new approach to average growth will make it easier to compare the average progress of students at different placement levels.

While the current *i-Ready* growth model provides one Recommended Target per grade and subject, the new model is designed to provide a more comprehensive view of student growth—Typical Growth and Stretch Growth—aligned with each grade-level placement. By providing multiple lenses to evaluate growth and more tightly tailored points of comparison, the new model offers a more relevant, more actionable assessment of students' growth.

How the New Growth Model Works

Stretch Growth

Stretch Growth sets an ambitious but attainable goal for student growth. The targets for Stretch Growth were set based on observations of the growth of a national sample of students who started at each placement level and achieved grade-level proficiency over time. For students placing below grade level, achieving Stretch Growth is a path to an "On Grade Level, Mid" placement. For students who are already on grade level at the beginning of the year, Stretch Growth provides a target for attaining or maintaining an "On Grade Level, Late" or "Above Grade Level" placement.

A Stretch Growth goal is provided for the student's current school year and represents the recommended growth for the current year. These will recalculate each year based on the student's actual performance; students will receive a new annual target based on their most recent fall Diagnostic. This ensures that students on a multi-year pathway will receive the most relevant annual target based on their actual growth in previous years.

Stretch Growth is attainable by design. Stretch Growth was defined using the growth trajectory of real students who achieved grade-level proficiency. The values for Stretch Growth represent above-average growth, but do not exceed the 80th percentile of growth for students in a given placement, ensuring that students can achieve them with additional instructional support and effort.

Typical Growth

Typical Growth is based on the observed growth and performance of the millions of students nationwide who have taken the *i-Ready Diagnostic*. Typical Growth is therefore a descriptive measure of growth; it is not intended to serve as a recommendation for sufficient growth, but it does offer a useful reference point to help identify groups of students who are lagging or surpassing median growth.

Typical Growth is defined as the median growth of students at a given placement level. Much like the median or 50th percentile of growth that some educators use as a reference point today, Typical Growth indicates how much students are growing compared to an average student nationally.

For most students who place "On Grade Level," achieving Typical Growth will help those students maintain their "On Grade Level" placement each academic year. Students who are placing "Below Grade Level" with a goal of attaining "On Grade Level" should use a higher goal, such as those provided for Stretch Growth.

How the New Growth Model Differs from SGP

The Student Growth Percentile (SGP) is a popular approach that is based on regression. A student's SGP describes a student's growth compared to other students with a similar prior test score. The SGP model is most often used to describe how student growth compares to similar students' typical growth given their prior score and percentile rank history. The following are a few notable differences between Curriculum Associates' new growth model and the SGP model.

Curriculum Associates' new growth model:

- Provides differentiated growth expectations using criterion-referenced placement levels
- Incorporates both norm- and criterion-referenced approaches to measuring students' Typical Growth

SGP model:

- Uses quantile regression
- Provides similar prediction by percentile rank
- Solely driven by historical observed data

After careful review of many different types of growth models, Curriculum Associates decided to use a model that provided an informative expectation for educators that would allow them to make informed decisions about growth, such as whether to set aspirational targets and how high to set them.

The New Growth Model

Starting in the 2018–2019 school year, Curriculum Associates will provide two empirically derived measures for understanding student growth: Stretch Growth and Typical Growth. These two measures will help educators understand what ambitious but realistic growth students should achieve to help more of their students reach proficiency over time (Stretch Growth) and how students perform relative to average students with similar starting points (Typical Growth).

■ **Stretch Growth by Subject, Grade, and Beginning Placement Level**

Stretch Growth is the academic year growth that a student should target to put him or her on a path to attaining or maintaining grade-level proficiency. The Stretch Growth values below are based on longitudinal analysis of national data from the 2015–2016 and 2016–2017 school years.

Mathematics									
Fall Diagnostic Placement Level	K	1	2	3	4	5	6	7	8
On Grade Level, Mid, Late, or Above	35	32	31	30	24	20	20	20	19
On Grade Level, Early	38	36	35	34	33	29	25	22	21
One Grade Level Below	39	37	36	35	34	31	26	23	22
Two Grade Levels Below	–	57	48	43	41	35	30	25	23
Three or More Grade Levels Below	–	–	–	55	47	41	35	33	31

Reading									
Fall Diagnostic Placement Level	K	1	2	3	4	5	6	7	8
On Grade Level, Mid, Late, or Above	54	44	27	21	20	18	15	14	13
On Grade Level, Early	65	56	43	39	27	25	25	23	22
One Grade Level Below	67	67	53	40	36	30	26	25	25
Two Grade Levels Below	–	96	81	63	50	47	38	37	36
Three or More Grade Levels Below	–	–	–	79	62	61	51	50	50

A note on Stretch Growth:

Stretch Growth is designed to put each student on a path toward grade-level proficiency. For many students, that path is expected to span from one to three years.

Stretch Growth targets for on-grade level students:

Stretch Growth targets for on-grade level students differ from those of below-grade level students. For students who are already on level at the beginning of the year, Stretch Growth provides a target for attaining or maintaining an “On Grade Level, Late” or reaching an “Above Grade Level” placement.

Typical Growth by Subject, Grade, and Beginning Placement Level

Typical Growth marks the median annual *i-Ready Diagnostic* score growth for each placement category. Typical Growth values are based on national data from the 2016–2017 school year.

<i>Mathematics</i>									
Fall Diagnostic Placement Level	K	1	2	3	4	5	6	7	8
On Grade Level, Mid, Late, or Above	21	21	18	21	19	14	13	11	9
On Grade Level, Early	24	26	22	25	23	18	13	12	9
One Grade Level Below	32	29	26	26	23	18	14	12	9
Two Grade Levels Below	–	36	29	27	23	18	14	13	10
Three or More Grade Levels Below	–	–	–	30	24	20	15	13	12

<i>Reading</i>									
Fall Diagnostic Placement Level	K	1	2	3	4	5	6	7	8
On Grade Level, Mid, Late, or Above	43	37	22	17	12	7	4	4	4
On Grade Level, Early	44	47	29	22	17	13	9	6	4
One Grade Level Below	49	49	39	26	20	16	12	10	9
Two Grade Levels Below	–	54	44	33	23	20	14	12	12
Three or More Grade Levels Below	–	–	–	36	28	26	19	17	18

Understanding Typical Growth:

- **Mathematics:** In early grades, lower-placing students grow more on average than higher-placing students. As students move toward the upper grades, the average growth at different placement levels converges. This may be driven by changes to the curriculum in these grades: students receiving advanced mathematics curricula maintain higher growth, while lower-placing students receive less advanced curricula and growth slows.
- **Reading:** High-performing students with advanced reading comprehension skills may slow in their progression of reading growth as the curriculum emphasis shifts to focus on developing other English language arts skills, such as writing.

Understanding the New Growth Model

Stretch Growth and Typical Growth are provided for each subject, grade, and placement level. Both measures, Stretch Growth and Typical Growth, have utility for understanding student growth and setting goals.

Stretch Growth sets an ambitious but attainable goal for student growth. A student achieving growth close to Stretch Growth is often growing well above average. For students performing below grade level, achieving growth closer to Stretch Growth will be necessary to attain on-grade level performance over time. For students already performing on grade level at the beginning of the year, reaching Stretch Growth ensures that students continue to maintain or advance to higher levels of performance.

Typical Growth represents average performance over an academic year. Students growing less than Typical Growth are demonstrating below-average growth, while students growing more are demonstrating above-average growth.

We provide both measures—Stretch Growth and Typical Growth—to help educators understand student growth in context.

Representative Student Examples of the New Growth Model

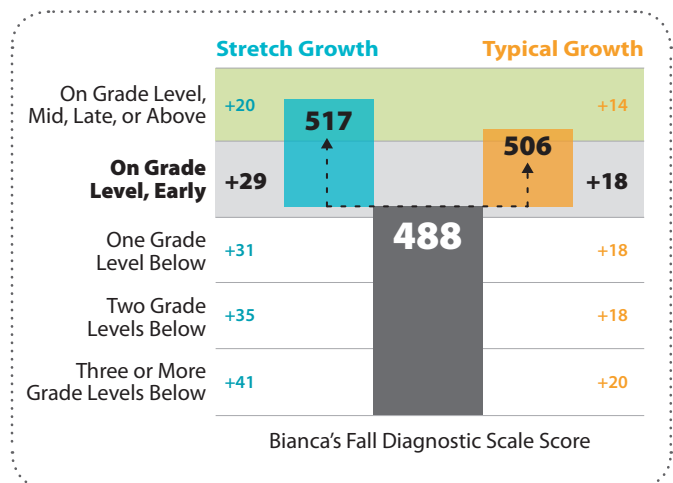
Typical and Stretch Growth for a Fifth Grade Student Placing “On Grade Level, Early”

Bianca, a fifth grade student, scores 488 on the fall *i-Ready Mathematics Diagnostic*, placing at “On Grade Level, Early.”

Fifth grade students placing at “On Grade Level, Early” typically grow 18 scale score points over the course of an academic year (i.e., points gained from fall to spring on the *i-Ready Diagnostic*). If Bianca grows by this amount, she will achieve a scale score of 506 by the end of the academic year. She will place at “On Grade Level, Mid” at the end of the academic year, and she will likely achieve “On Grade Level” placement at the beginning of the next academic year.

If she achieves the higher, more ambitious 29 points of growth, she will perform at the upper end of “On Grade Level, Mid” and be poised to achieve a more advanced placement in subsequent years.

For Bianca, achieving any score between the two benchmarks will help ensure that she continues to achieve proficiency.



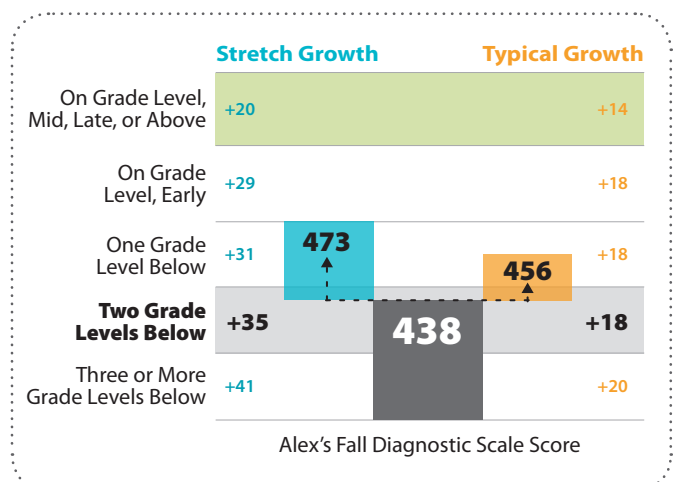
Placement Range Target Range

Typical and Stretch Growth for a Fifth Grade Student Placing “Two Grade Levels Below”

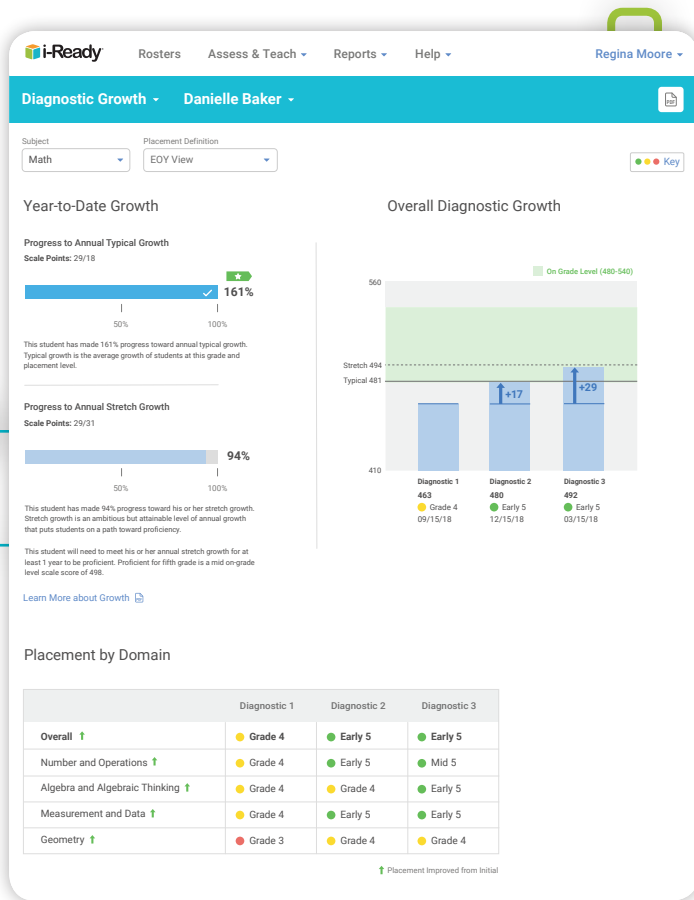
Alex, another fifth grade student, scores 438 on the fall *i-Ready Mathematics Diagnostic*, placing at “Two Grade Levels Below.”

Students placing at “Two Grade Levels Below” typically grow 18 scale score points over the course of an academic year (i.e., points gained from fall to spring on the *i-Ready Diagnostic*). If Alex grows by this amount, she will move up a grade level in placement, but she will still be below grade level.

If she achieves a more ambitious gain of 35 points, she will still place one grade level below, but will be much closer to on-grade level performance. In general, students who are below grade level will need one to three years of meeting Stretch Growth to be on track to achieve proficiency.



How Growth Will Be Reported in *i-Ready* When the New Model Is Implemented in the 2018–2019 Academic Year



Teacher Report

For each student who takes the Diagnostic assessment, the student's observed score gain relative to Typical Growth and to Stretch Growth is displayed. This is presented as a percentage in the teacher report. In this example, the student reached 161% of Typical Growth, meaning the student achieved typical growth and exceeded it by 61%. The same student achieved 94% of their Stretch Growth.

Class, School, and District Reports

For classroom, school, and district aggregate reports, the median of a group's growth to the median of the group's Typical Growth and Stretch Growth will show the group's progress. If a class of students achieved 132% of Typical Growth, it means that, on average, the students performed better than average for their placement level.

Reports featuring *i-Ready's* new growth model will be available in *i-Ready* for the 2018–2019 academic year as part of a completely redesigned teacher experience.

**Image is a sample and subject to change.*



Curriculum Associates



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