

ECRA Student Growth Quick Guide

Overview

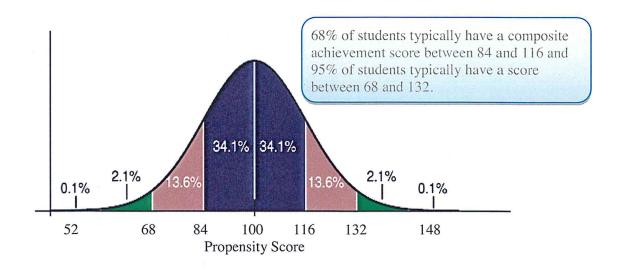
The ECRA Group, Inc. (ECRA) Local Growth Model compares the growth of an individual student with local growth trends of students with the same historical achievement in the District. Growth results can be examined by each individual student, or the student growth scores of a group of students can be aggregated by grade, subject, school, or subgroup.

Growth Model Development

Growth models analyze longitudinal student achievement data using advanced statistical modeling techniques to quantify growth. The ECRA Local Growth Model (LGM) assigns each District student a projected score based on prior achievement and typical district growth profiles. To evaluate student growth, students' actual test scores are compared to the projected values provided by the prediction model. The difference between the projected and actual student achievement on assessments is summarized by a growth score and a color coded rating. Aggregation of individual student growth scores provides a measure of overall student growth for groups of students, whether by classroom, program, school, or subgroup.

Composite Achievement (Propensity) Scores

The propensity score is a composite of individual student test scores that reduces the complexity of assessment data by distilling all the predictive information contained in multiple past test scores into a single score. The composite achievement (propensity) score is scaled to represent the student's achievement relative to the mean (100) and the standard deviation (16) of prior students in the same grade and district. The composite achievement score captures past achievement in a way that best predicts future performance on a specific assessment.



Growth Scores

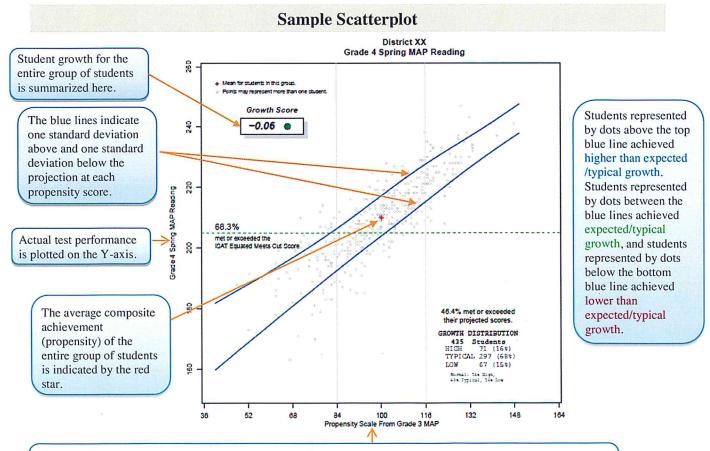
Growth scores represent the magnitude of the difference between actual and expected achievement. Each deviation from zero indicates more (or less) than expected growth observed in the District based on historical data. A negative growth score does not indicate a student is losing knowledge, but rather that the student did not learn as much throughout the school year as his or her peers with the same historical achievement.

Student growth is considered typical or "expected" unless the growth score is statistically significant and educationally relevant. Growth is categorized in the reports using the following scale.



The following two conditions must be met in order for a growth score to be deemed statistically and educationally significant:

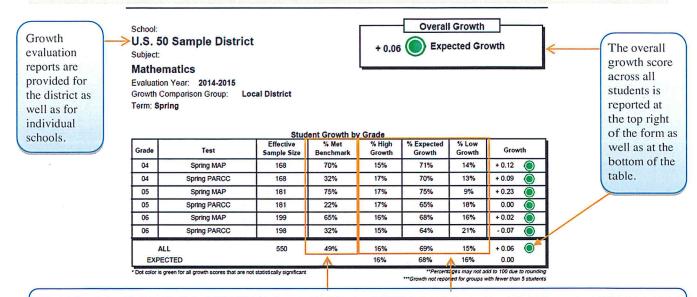
- The difference between projected and actual achievement is statistically significant.
- The magnitude of the growth statistic is greater than or equal to the absolute value of 0.3, which is established as an educationally relevant effect size by the research community.



Propensity (composite achievement) scores based on historical achievement are plotted on the X-axis. Students with propensity scores greater than 116 have above average past performance compared to the average district student in the same grade, while those with propensity scores less than 84 have below average past performance.

Page 2

Sample Growth Summary Form



The percentage of students who met the state or college readiness benchmark, as well as achieved higher than expected/typical, expected/typical, and lower than expected/typical growth are summarized in the middle columns of the table.

The ECRA Local Growth Model (LGM) compares the growth of each individual student with local growth trends of students with the same historical achievement in the District. Below is an illustration of the process by which student growth is determined.

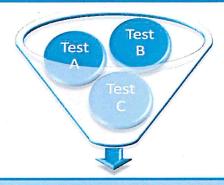
STEP 1

Build Local District Growth Norms

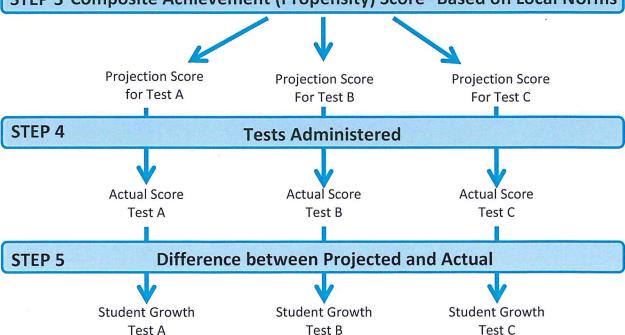
- Multiple years of historical data
- Universally administered tests
- Growth norms built by grade and subject

STEP 2

Students' Scores from Previous Year



STEP 3 Composite Achievement (Propensity) Score* Based on Local Norms



^{*} The propensity score is a composite of individual student test scores, scaled to a mean of 100 and standard deviation of 16. This composite achievement (propensity) score reduces the complexity of assessment data by distilling all the predictive information contained in multiple past test scores into a single score. The composite achievement score is then used to determine the projected score for each future assessment.

District 228 Geneseo Growth Model Methods 2017-2018

The District 228 Geneseo growth model was built using CBA, PSAT, SAT, PARCC, and Measured Progress data from District 228 Geneseo between 2014 and 2017. The model was built to reflect typical student growth in the district. With this model, each District 228 Geneseo student with historical test score data was assigned a propensity, or composite achievement score, based on his or her historical assessment scores. The composite achievement score indicates the expected achievement for that student during the evaluation year. To evaluate student growth, students' actual CBA, PSAT, SAT, PARCC, and Measured Progress scores will be compared to the expected values provided by the prediction models. Models for high school fall PSAT and spring SAT will be built as assessment data becomes available during the 2017-2018 school year. Assessments used to compute propensity and to measure growth are listed in Table 1 below.

Table 1: Growth Model Assessments 2017-2018

Grade(s)	Inputs for Propensity	Outcomes for Growth
2 nd Grade	1st Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring)
3 rd Grade	2 nd Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring) eMPower Reading, Math & Writing (Fall/Winter/Spring)*
4 th Grade	3 rd Grade PARCC ELA & Math (Spring) 3 rd Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring) eMPower Reading, Math & Writing (Fall/Winter/Spring)*
5 th Grade	4th Grade PARCC ELA & Math (Spring) 4th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring) eMPower Reading, Math & Writing (Fall/Winter/Spring)*
6 th Grade	5th Grade PARCC ELA & Math (Spring) 5th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring) eMPower Reading, Math & Writing (Fall/Winter/Spring)*
7 th Grade	6th Grade PARCC ELA & Math (Spring) 6th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring) eMPower Reading, Math & Writing (Fall/Winter/Spring)*
8 th Grade	7 th Grade PARCC ELA & Math (Spring) 7 th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring) Measured Progress Reading and Math (Fall) eMPower Reading, Math & Writing (Fall/Winter/Spring)*
9th Grade	8 th Grade PARCC ELA & Math (Spring) 8 th Grade Measured Progress (Fall)	PSAT Composite, Math, & ELA (Fall)
10 th Grade	9th Grade PSAT ELA & Math (Fall)	PSAT Composite, Math, & ELA (Fall)*
11 th Grade	10 th Grade PSAT ELA & Math (Fall)	PSAT Composite, Math, & ELA (Fall)* SAT Composite, Math, & ELA (Spring)*

^{*} Projections will not be provided in advance but growth will be evaluated as data becomes available



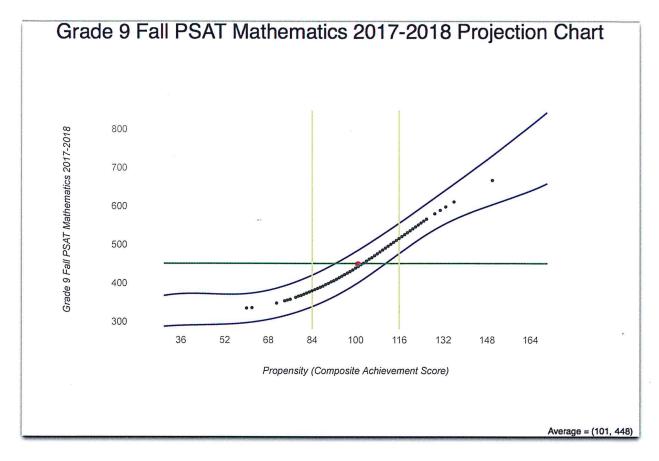
District 228 Geneseo Growth Model Methods 2016-2017

The District 228 Geneseo growth model was built using CBA, PARCC, and Measured Progress data from District 228 Geneseo between 2014 and 2016. The model was built to reflect typical student growth in the district. With this model, each District 228 Geneseo student with historical test score data was assigned a propensity, or composite achievement score, based on his or her historical assessment scores. The composite achievement score indicates the expected achievement for that student during the evaluation year. To evaluate student growth, students' actual CBA, PARCC, and Measured Progress scores will be compared to the expected values provided by the prediction models. Models for high school fall PSAT and spring SAT will be built as assessment data becomes available during the 2016-2017 school year as this is the first year these assessments will be given. The assessments used to compute propensity and to measure growth are listed in Table 1 below.

Table 1: Growth Model Assessments 2016-2017

Grade(s)	Inputs for Propensity	Outcomes for Growth
1st Grade	Kindergarten CBA Reading & Math (Spring)	CBA Reading & Math (Spring)
2 nd Grade	1st Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring)
3 rd Grade	2 nd Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring)
4 th Grade	3 rd Grade PARCC ELA & Math (Spring) 3 rd Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring)
5 th Grade	4 th Grade PARCC ELA & Math (Spring) 4 th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring)
6 th Grade	5 th Grade PARCC ELA & Math (Spring) 5 th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring)
7 th Grade	6 th Grade PARCC ELA & Math (Spring) 6 th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) PARCC Reading, Math, ELA, & Writing (Spring)
8 th Grade	7 th Grade PARCC ELA & Math (Spring) 7 th Grade CBA Reading & Math (Spring)	CBA Reading & Math (Spring) Measured Progress Reading and Math (Fall) PARCC Reading, Math, ELA, & Writing (Spring)
9 th Grade	8 th Grade PARCC ELA & Math (Spring) 8 th Grade Measured Progress (Fall)	PSAT Composite, Math, & ELA (Fall)
10 th Grade	8th Grade PARCC ELA & Math (Spring)	PSAT Composite, Math, & ELA (Fall)
11 th Grade	10th Grade PSAT ELA & Math (Spring)	PSAT Composite, Math, & ELA (Fall) SAT Composite, Math, & ELA (Spring)







Information

Group Growth Values

Higher than Expected Growth: Growth is 0.30 or Above

Expected Growth: Growth from -0.29 to 0.29

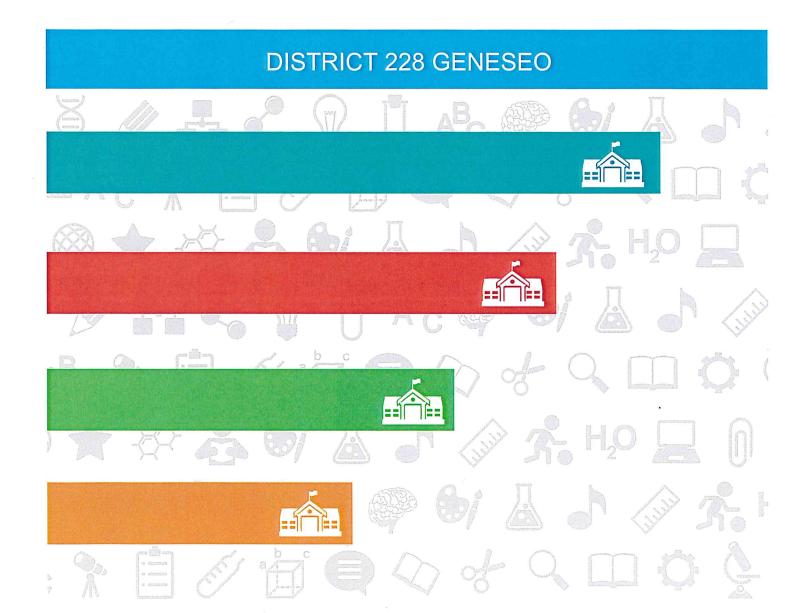
Lower than Expected Growth: Growth from -0.30 to -0.59

Unsatisfactory Growth: Growth -0.60 or Below

No Growth values are printed for groups with fewer than 5 students.

Dot color is set to green for Growth scores that are not statistically different from zero.







District Criterion by Grade and Subject (2016-2017)

Growth Year:

2016-2017

Growth Comparison Group:

Local District

Term: Spring

The following table summarizes assessments evaluated at each grade level and subject. Please note, since PARCC ELA is a composite score of reading and writing, growth is reported for each subtest in this report. To view growth charts to the composite ELA, as well as the subtests, please see the School Improvement application.

Criterion by Grade and Subject

Grade	ELA	Mathematics	Reading	Writing
01	Spring CBA	Spring CBA		
02	Spring CBA	Spring CBA		
03	Spring CBA	Spring PARCC, Spring CBA	Spring PARCC	Spring PARCC
04	Spring CBA	Spring PARCC, Spring CBA	Spring PARCC	Spring PARCC
05	Spring CBA	Spring PARCC, Spring CBA, Spring Empower	Spring PARCC, Spring Empower	Spring PARCC, Spring Empower
06	Spring CBA	Spring PARCC, Spring CBA	Spring PARCC	Spring PARCC
07	Spring CBA	Spring PARCC, Spring CBA	Spring PARCC	Spring PARCC
08	Spring CBA	Spring PARCC, Spring CBA, Spring Empower	Spring PARCC, Spring Empower	Spring PARCC, Spring Empower
11	Spring SAT	Spring SAT		





District Overall Growth Summary (2016-2017)

Subject:

All Subjects

Growth Year:

2016-2017

Growth Comparison Group:

Local District

Term: Spring

Overall Growth

Expected Growth

Student Growth by School

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School:	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Grow	rth
GENESEO HIGH SCHOOL	173	59%	16%	69%	15%	0.00	
GENESEO MIDDLE SCHOOL	594	38%	17%	66%	18%	- 0.01	
MILLIKIN ELEMENTARY	313	37%	13%	62%	25%	- 0.26	
NORTHSIDE ELEMENTARY	213	43%	13%	71%	16%	+ 0.05	
SOUTHWEST ELEMENTARY	281	35%	18%	65%	17%	+ 0.01	
ALL		41%	15%	66%	19%	- 0.05	
EXPECTED			16%	68%	16%	0.00	_

^{*} Dot color is green for all growth scores that are not statistically significant

**Percentages may not add to 100 due to rounding

***Growth not reported for groups with fewer than 5 students



Higher than
Expected Growth
Growth is +0.30 or
above



Expected Growth
Growth from -0.29

to +0.29



Lower than Expected Growth Growth from -0.30 to -0.59



Unsatisfactory Growth Growth is -0.60 or

rom -0.30 Growt below





[^] Effective sample size only include students with at least 2 predictors



District Building-Level Growth Summary (2016-2017)

Subject:

ELA

Growth Year:

2016-2017

Growth Comparison Group:

Local District

Term: Spring

Overall Growth

0.11

Expected Growth

Student Growth by School

Student Growth by School							
School	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Growt	th
GENESEO HIGH SCHOOL	173	69%	17%	67%	16%	0.00	
GENESEO MIDDLE SCHOOL	578	N/A	19%	66%	15%	+ 0.09	
MILLIKIN ELEMENTARY	312	N/A	21%	58%	21%	- 0.03	
NORTHSIDE ELEMENTARY	192	N/A	18%	71%	10%	+ 0.28	
SOUTHWEST ELEMENTARY	279	N/A	24%	63%	14%	+ 0.25	
ALL		69%	20%	65%	16%	+ 0.11	
EXPECTED			16%	68%	16%	0.00	

^{*} Dot color is green for all growth scores that are not statistically significant



Higher than Expected Growth Growth is +0.30 or above



Expected Growth
Growth from -0.29

to +0.29



Lower than Expected Growth Growth from -0.30 to -0.59



Unsatisfactory Growth Growth is -0.60 or

below





[^] Effective sample size only includes students with at least 2 predictors

^{**}Percentages may not add to 100 due to rounding ***Growth not reported for groups with fewer than 5 students



District Building-Level Growth Summary (2016-2017)

Subject:

Mathematics

Growth Year:

2016-2017

Growth Comparison Group:

Local District

Term: Spring

Overall Growth

Expected Growth

Student Growth by School

School	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Grow	rth .
GENESEO HIGH SCHOOL	173	48%	16%	71%	13%	0.00	
GENESEO MIDDLE SCHOOL	592	36%	17%	66%	18%	- 0.01	
MILLIKIN ELEMENTARY	313	35%	7%	60%	33%	- 0.50	
NORTHSIDE ELEMENTARY	170	52%	15%	69%	16%	+ 0.07	
SOUTHWEST ELEMENTARY	281	36%	14%	66%	20%	- 0.14	
ALL		39%	14%	65%	21%	- 0.13	
EXPECTED	•		16%	68%	16%	0.00	

^{*} Dot color is green for all growth scores that are not statistically significant

Percentages may not add to 100 due to rounding *Growth not reported for groups with fewer than 5 students



Higher than Expected Growth Growth is +0.30 or above



Expected Growth
Growth from -0.29
to +0.29



Lower than Expected Growth Growth from -0.30 to -0.59







[^] Effective sample size only includes students with at least 2 predictors



District Building-Level Growth Summary (2016-2017)

Subject:

Reading

Growth Year:

2016-2017

Growth Comparison Group:

Local District

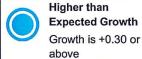
Term: Spring

Overall Growth Expected Growth

Student Growth by School

School	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% L <mark>ow</mark> Growth	Growth
GENESEO MIDDLE SCHOOL	521	44%	11%	68%	20%	- 0.20
MILLIKIN ELEMENTARY	178	43%	17%	66%	18%	- 0.05
NORTHSIDE ELEMENTARY	120	49%	17%	61%	23%	- 0.11
SOUTHWEST ELEMENTARY	178	42%	17%	62%	21%	- 0.06
ALL		44%	14%	66%	20%	- 0.14
EXPECTED			16%	68%	16%	0.00

^{*} Dot color is green for all growth scores that are not statistically significant





Expected Growth

Growth from -0.29 to +0.29



Lower than **Expected Growth** Growth from -0.30 to -0.59



Unsatisfactory Growth Growth is -0.60 or

below





[^] Effective sample size only includes students with at least 2 predictors

^{*}Percentages may not add to 100 due to rounding

^{***}Growth not reported for groups with fewer than 5 students



District Building-Level Growth Summary (2016-2017)

Subject:

Writing

Growth Year:

2016-2017

Growth Comparison Group:

Local District

Term: Spring

Overall Growth

Expected Growth

Student Growth by School

School	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Growth
GENESEO MIDDLE SCHOOL	442	37%	19%	65%	15%	+ 0.11
MILLIKIN ELEMENTARY	152	36%	9%	70%	21%	- 0.16
NORTHSIDE ELEMENTARY	101	31%	12%	68%	19%	- 0.15
SOUTHWEST ELEMENTARY	148	32%	15%	67%	19%	- 0.13
ALL		35%	16%	67%	17%	- 0.01
EXPECTED			16%	68%	16%	0.00

^{*} Dot color is green for all growth scores that are not statistically significant



Higher than **Expected Growth** Growth is +0.30 or above



Expected Growth Growth from -0.29 to +0.29



Lower than **Expected Growth** Growth from -0.30



Unsatisfactory Growth Growth is -0.60 or below

to -0.59





[^] Effective sample size only includes students with at least 2 predictors

^{**}Percentages may not add to 100 due to rounding

^{***}Growth not reported for groups with fewer than 5 students



District Grade-Level Growth Summary (2016-2017)

Subject:

Mathematics

Growth Year:

2016-2017

Growth Comparison Group:

Local District

Term: Spring

Overall Growth

0.13

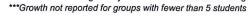
Expected Growth

Student Growth by Grade

Grade	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Growth
01	111	N/A	13%	64%	23%	- 0.27
02	152	N/A	4%	80%	16%	- 0.07
03	157	36%	22%	57%	21%	+ 0.04
04	179	32%	8%	59%	33%	- 0.50
05	165	49%	10%	62%	28%	- 0.36
06	196	36%	22%	66%	12%	+ 0.24
07	178	27%	8%	63%	29%	- 0.39
08	218	43%	19%	67%	14%	+ 0.06
11	173	48%	16%	71%	13%	0.00
ALL		39%	14%	65%	21%	- 0.13
EXPECT	ED		16%	68%	16%	0.00

^{*} Dot color is green for all growth scores that are not statistically significant

^{**}Percentages may not add to 100 due to rounding





Higher than Expected Growth Growth is +0.30 or above



Expected Growth
Growth from -0.29

to +0.29



Lower than Expected Growth Growth from -0.30 to -0.59



Unsatisfactory Growth Growth is -0.60 or

below





[^] Effective sample size only includes students with at least 2 predictors



District Grade-Level Growth Summary (2016-2017)

Subject:

Reading

Growth Year:

2016-2017

Growth Comparison Group:

Local District

Term: Spring

Overall Growth

4 Expected Growth

Student Growth by Grade

Grade	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Grow	th
03	146	31%	18%	59%	23%	- 0.13	
04	165	47%	15%	69%	16%	0.00	
05	165	54%	18%	60%	22%	- 0.09	
06	168	40%	7%	68%	26%	- 0.46	
07	135	42%	16%	68%	16%	- 0.03	
08	218	48%	12%	69%	19%	- 0.10	
ALL EXPECT	ED .	44%	14% 16%	66% 68%	20% 16%	- 0.14 0.00	O

^{*} Dot color is green for all growth scores that are not statistically significant

**Percentages may not add to 100 due to rounding

***Growth not reported for groups with fewer than 5 students



Higher than Expected Growth Growth is +0.30 or above



Expected Growth
Growth from -0.29

to +0.29



Lower than Expected Growth Growth from -0.30 to -0.59







[^] Effective sample size only includes students with at least 2 predictors



District Grade-Level Growth Summary (2016-2017)

Subject:

Writing

Growth Year:

2016-2017

Growth Comparison Group:

Local District

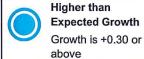
Term: Spring

Overall Growth
- 0.01 Expected Growth

Student Growth by Grade

Grade	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Growth
03	92	20%	10%	62%	28%	- 0.32
04	147	17%	12%	72%	16%	- 0.08
05	162	56%	13%	69%	18%	- 0.11
06	130	28%	14%	69%	17%	- 0.03
07	98	32%	39%	51%	10%	+ 0.59
08	214	46%	13%	70%	17%	- 0.03
ALL EXPECTI	ED	35%	16% 16%	67% 68%	17% 16%	- 0.01

^{*} Dot color is green for all growth scores that are not statistically significant





Expected Growth
Growth from -0.29

to +0.29



Lower than Expected Growth Growth from -0.30 to -0.59







[^] Effective sample size only includes students with at least 2 predictors

^{**}Percentages may not add to 100 due to rounding

^{***}Growth not reported for groups with fewer than 5 students



District Grade-Level Growth Summary (2016-2017)

Subject: ELA

Growth Year: 2016-2017

Growth Comparison Group: **Local District**

Term: Spring



Student Growth by Grade

Grade	Effective Sample Size^	% Met Benchmark	% High Growth	% Expected Growth	% Low Growth	Growth
01	154	N/A	6%	75%	19%	- 0.18
02	152	N/A	23%	56%	21%	- 0.03
03	155	N/A	20%	71%	9%	+ 0.26
04	175	N/A	21%	65%	15%	+ 0.16
05	147	N/A	38%	47%	15%	+ 0.53
06	190	N/A	4%	69%	26%	- 0.44 🔘
07	175	N/A	29%	60%	11%	+ 0.34
08	213	N/A	24%	68%	8%	+ 0.34
11	173	69%	17%	67%	16%	0.00
ALL		69%	20%	65%	16%	+ 0.11
EXPECT	ED		16%	68%	16%	0.00

^{*} Dot color is green for all growth scores that are not statistically significant

Percentages may not add to 100 due to rounding *Growth not reported for groups with fewer than 5 students



Higher than **Expected Growth** Growth is +0.30 or above



Expected Growth Growth from -0.29 to +0.29



Lower than **Expected Growth** Growth from -0.30 to -0.59







[^] Effective sample size only includes students with at least 2 predictors