

SOUTH CAROLINA ADDED-VALUE GROWTH MODEL

2023 TARGET SCORING AND 2024 TARGET SETTING

Overview

The state of South Carolina is transitioning from a value-added (VA) school growth model to an added-value (AV) school growth model for the purpose of the Student Progress Indicator in the School Report Cards. In the AV model, students are classified based on the extent to which their growth crosses a threshold established based on historical growth patterns in South Carolina. More information about the approach and methodology can be found in the [2023-2024 Accountability Manual](#) (tables from the manual are also shared in this document).

At the beginning of each school year, school districts will receive SC READY targets for every student in their district that took SC READY the prior year. Each student will have two targets – one for average growth and one for “added” growth. The targets for added growth are based on what is needed to get all students to meet grade-level expectations in ELA and math by the end of 8th grade. Therefore, the growth targets are larger for students with lower prior achievement.

At the end of each school year, school districts will receive files with information about whether students met their SC READY targets. Starting in 2024, schools will then receive points on the Student Progress Indicator in the School Report Cards based on how many students met their targets. More points are awarded for attaining added growth rather than average growth and for students with lower prior achievement (the description of how rating points are earned is described in pages 53-59 of the [2023-2024 Accountability Manual](#)).

2023 Target Scoring

As stated above, the added-value model sets two targets for students based on their prior SC READY performance:

- Average, or median, annual target (MAT) – set at the 50th percentile of historical growth for each grade and subject.
- Added-value target (AVT) – set between the 55th and 80th percentile of historical growth based on the prior year’s score and performance category, as seen in Table 1.

MAT and AVT for all ELA and math pre-test scores are shown at the end of the document in Table 2.

DELIVERABLES

The 2023 SC READY **target scoring** file and related information will be delivered to districts on August 1, 2023.

The following deliverables will be included:

- Student-level file with 2023 SC READY MAT and AVT and whether those targets were met.
- School-level file containing the percent of students in each growth percentile category (i.e., 50, 55, 60, 65, 70, 75, 80) and the percent of students within each category who met the growth target.
- School- and district-level graphs displaying the percent of students in each growth percentile category and the percent of students within each category who met the growth target.

Student Inclusion in the Data File

Districts will receive scored targets for students based on the **2022-23 PowerSchool rosters** pushed to EdFi. The following students are included in the target scoring file (regardless of whether they have an SC READY score):

1. Students who were continuously enrolled at the same school in the 2022-23 school year (enrolled on day 45 and day 160 with no break in enrollment).
2. Students who were enrolled in the district on May 23, 2023. This way the file is more comprehensive in capturing student enrollment beyond continuously enrolled students.

The 2023 student growth targets were set for students based on their performance on the 2022 SC READY assessment in the same subject. Since a 2022 SC READY score is necessary to receive target scores for 2023 SC READY, only students in grades 4-8 in the 2022-23 school year have 2023 SC READY targets. Students who repeated a grade received a target associated with the grade they were enrolled in during the 2022-23 school year.

Duplicates

The student-level file should contain two rows for each student – one for ELA and one for math. The following decision rules were applied to address duplicate entries:

- For students with multiple SC READY scores in the same subject, their highest score is selected.
- Student state IDs that appear multiple times with different names or birthdays are dropped.
- Students identified as being continuously enrolled in two schools are excluded (because it is not possible to determine which entry is valid).
- Students enrolled in two schools on May 23 are excluded (because it is not possible to determine which entry is valid).
- Students continuously enrolled in one school and enrolled in a different school on May 23 will be included in both schools.

2024 Target Setting

DELIVERABLES

The 2024 SC READY **target setting** files will be delivered to districts on August 10, August 24, and October 26, 2023.

The following deliverable will be included:

- Student-level file with 2024 SC READY AVT and MAT, which are determined by 2023 SC READY scores.

Student Inclusion in the Data File

Districts will receive 2024 targets for students based on the **2023-24 PowerSchool rosters** pushed to EdFi. The following 4th-8th grade students are included in the target setting file (regardless of whether they have a 2023 SC READY score, which is used to set 2024 targets):

1. Students who are enrolled in the district on the day of the data pull (which will be August 10, August 24, and October 26).

Duplicates

The student-level file should contain two rows for each student – one for ELA and one for math. The following decision rules were applied to address duplicate entries:

- For students who had multiple 2023 SC READY scores in the same subject, their highest score is selected in order to identify 2024 SC READY targets.
- Student state IDs that appear multiple times with different names or birthdays are dropped.
- Students enrolled in two schools on the day of the data pull are excluded, unless one of the schools is identified as a primary school. In that case, the students will be included in the primary schools' files.

Added-Value Model Methodology

QUANTILE REGRESSION

The data set used to measure the historical percentiles of growth is one that pools three years of past growth on the SC READY assessment:

- growth from the 2016-17 SC READY to the 2017-18 SC READY;
- growth from the 2017-18 SC READY to the 2018-19 SC READY; and
- growth from the 2020-21 SC READY to the 2021-22 SC READY.

The historical percentiles of growth are estimated over this data set using quantile regression. Quantile regression creates a prediction for any percentile of growth among students with a given assessment score. The prediction is based not only on students with exactly that score, but also students with scores near that score. This increases the number of students used to measure the historical percentile, which makes the percentile more precise and more useful for setting targets for gain in the present and future.

The quantile regression is estimated separately for each grade and subject. It is also estimated separately for each percentile of gain. Historical percentiles of gain are estimated for the 50th, 55th, 60th, 65th, 70th, 75th, and 80th percentiles.

Table 1. Historically Observed Conditional Growth Percentiles Used to Set Added Value Targets (AVTs) for Growth at Various Prior SC READY Scores (*note that this is Table 13 from the Accountability Manual*)

Current Grade Level:	4 th Grade	5 th Grade	6 th Grade	7 th Grade	8 th Grade
Prior Achievement Band 6 (<i>≈ Exceeds</i>)					
Prior ELA SC READY score range:	540 – 825	600 – 850	660 – 875	670 – 900	710 – 925
Prior Math SC READY score range:	550 – 825	570 – 850	630 – 875	630 – 900	650 – 925
AVT based on historically observed conditional growth percentile:	55				
Prior Achievement Band 5 (<i>≈ Meets</i>)					
Prior ELA SC READY score range:	460 – 539	510 – 599	560 – 659	580 – 669	620 – 709
Prior Math SC READY score range:	440 – 549	490 – 569	540 – 629	550 – 629	580 – 649
AVT based on historically observed conditional growth percentile:	60				
Prior Achievement Band 4 (<i>≈ upper half of Approaches</i>)					
Prior ELA SC READY score range:	410 – 459	470 – 509	510 – 559	520 – 579	570 – 619
Prior Math SC READY score range:	410 – 439	450 – 489	490 – 539	500 – 549	540 – 579
AVT based on historically observed conditional growth percentile:	65				
Prior Achievement Band 3 (<i>≈ lower half of Approaches</i>)					
Prior ELA SC READY score range:	360 – 409	420 – 469	450 – 509	460 – 519	520 – 569
Prior Math SC READY score range:	360 – 409	410 – 449	450 – 489	460 – 499	490 – 539
AVT based on historically observed conditional growth percentile:	70				
Prior Achievement Band 2 (<i>≈ upper half of Does Not Meet</i>)					
Prior ELA SC READY score range:	320 – 359	360 – 419	410 – 449	420 – 459	470 – 519
Prior Math SC READY score range:	320 – 359	370 – 409	420 – 449	420 – 459	460 – 489
AVT based on historically observed conditional growth percentile:	75				
Prior Achievement Band 1 (<i>≈ lower half of Does Not Meet</i>)					
Prior ELA SC READY score range:	100 – 319	100 – 359	100 – 409	100 – 419	100 – 469
Prior Math SC READY score range:	100 – 319	100 – 369	100 – 419	100 – 419	100 – 459
AVT based on historically observed conditional growth percentile:	80				

Using the MAT and AVT Lookup Table (Table 2)

To identify an individual student's target score for the next SC READY administration, first round their vertical scale score from the prior year (whether ELA or math) *down* to the nearest multiple of 10 and find that score in the gray, center column of Table 2. For ELA, look to the left on that row to the student's current grade level to find growth targets for this year's test. The target is to be added on top of last year's score (an example is given in the next paragraph). Follow the same procedure for math but look to the right to the current grade level to find

growth targets for this year's test. The minimum vertical scale score point gains that are needed to meet the MAT goal are shown in the unshaded column and gains needed to meet the AVT goal are shown in the shaded column.

It is by design that MATs and AVTs are assigned based on rounded down scores and that all students whose prior year scores round down to the same score are assigned the same target gains. The result of this design feature is that the performance level of a student's original (unrounded) scale score may not be the same as the performance level associated with their rounded down score.

Take this example (which is the same example that is in the EOC report). Imagine that Anna is in 5th grade and scored 419 on the ELA SC READY last year. Anna's score falls within the Appr1 range (for which growth targets are typically set to 70th percentile gains). However, since the rounded score of 410 falls within the DNM2 range, Anna's growth target is based on 75th percentile gains. Table 2 indicates that MAT = 50 and AVT = 89 for Anna. Thus, if Anna scores 469 or higher (i.e., her prior year score of 419 plus her MAT of 50) on the ELA SC READY in 5th grade, she will earn at least one point for her school in the accountability system. If Anna scores 508 or higher (i.e., 419 + 89) on the 5th grade ELA test, she will earn additional points for meeting her AVT.

Table 2. Median Annual Growth Target (MAT) and Added Value Growth Target (AVT) Lookup Table (*note that this is Table 14 from the [Accountability Manual](#)*)

Growth Targets for ELA SC READY										Prior Year Score	Growth Targets for Math SC READY									
Grade 4		Grade 5		Grade 6		Grade 7		Grade 8			Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT		MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT
226	307	338	438	285	327	264	387	334	339	100	256	302	265	301	285	363	318	342	327	334
212	278	309	393	269	307	264	387	327	332	110	240	282	258	292	278	348	308	335	326	334
202	260	291	365	258	294	264	387	322	327	120	229	268	252	285	273	338	301	329	324	332
192	244	273	340	247	281	264	387	315	320	130	218	255	245	278	267	327	294	323	321	329
181	228	257	316	235	269	264	387	308	314	140	207	242	238	270	260	315	285	315	317	326
171	214	241	293	224	256	264	387	300	308	150	196	229	230	261	252	304	277	307	312	321
160	201	225	273	213	243	264	387	292	300	160	185	217	222	252	243	291	268	299	306	315
150	188	211	254	201	231	264	387	283	292	170	173	204	213	243	234	279	259	290	299	309
140	177	197	237	190	219	264	387	273	284	180	162	192	204	234	225	267	249	280	292	302
130	167	184	221	178	207	250	353	263	275	190	152	181	194	224	215	254	239	271	283	294
120	158	171	206	167	195	237	327	253	266	200	141	170	185	214	205	242	229	260	274	286
111	149	160	193	156	184	225	303	242	256	210	131	160	175	204	194	229	219	250	265	277
102	142	148	181	145	173	213	280	231	246	220	121	150	165	195	183	216	208	239	255	267
94	136	138	170	134	162	201	259	220	236	230	111	141	155	185	172	204	198	228	244	258
86	130	128	161	123	152	189	240	208	225	240	102	132	145	175	161	191	187	218	233	247
79	125	119	152	113	142	177	222	197	215	250	94	124	135	166	149	179	176	207	222	237
73	121	111	144	103	133	165	206	185	204	260	86	117	125	157	138	167	166	196	210	226

Growth Targets for ELA SC READY										Prior Year Score	Growth Targets for Math SC READY									
Grade 4		Grade 5		Grade 6		Grade 7		Grade 8			Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT		MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT
68	118	103	138	94	124	154	191	174	193	270	78	111	116	148	127	155	155	185	199	216
63	116	96	132	85	115	143	177	162	183	280	72	106	107	140	116	144	145	174	187	205
60	114	89	126	76	108	133	165	151	172	290	66	102	98	132	105	133	135	164	175	194
58	113	83	122	68	100	123	153	139	162	300	61	99	90	125	94	123	125	153	163	183
57	113	78	118	60	94	113	143	128	152	310	56	96	83	119	84	113	115	143	152	173
57	101	73	115	53	88	104	135	118	142	320	53	85	76	113	74	103	106	134	140	163
58	102	68	112	46	82	95	127	107	133	330	50	84	69	108	64	95	97	125	129	153
59	103	65	110	41	78	88	120	97	124	340	48	83	64	104	55	87	88	116	118	143
61	104	62	108	35	74	80	114	87	116	350	46	82	59	101	47	79	80	108	107	134
62	96	59	96	31	71	74	110	78	108	360	45	73	55	99	39	73	72	100	97	125
63	98	57	94	27	68	68	106	70	100	370	43	71	52	88	32	67	64	93	88	117
63	99	55	93	24	67	63	102	62	94	380	41	69	50	87	26	63	58	87	79	110
64	100	53	92	22	66	59	100	55	88	390	39	68	49	88	21	59	51	82	71	103
65	102	51	91	21	66	56	98	48	83	400	38	67	48	88	16	56	46	77	63	97
67	92	50	89	20	58	54	97	42	79	410	36	57	48	79	12	54	41	73	57	92
68	94	48	78	21	59	52	87	38	75	420	34	56	48	80	10	45	37	63	51	88
70	96	47	77	21	60	52	87	34	73	430	32	55	48	81	8	45	33	61	46	84
72	97	45	76	22	62	51	87	31	72	440	31	46	48	81	7	45	30	59	42	82
73	98	44	76	23	54	51	87	29	71	450	30	45	48	70	7	37	27	57	40	81
74	90	43	75	24	55	50	79	28	72	460	29	44	47	69	7	37	25	48	38	72
74	89	42	63	24	56	50	78	28	64	470	28	44	47	68	7	37	23	47	37	72
74	89	42	63	25	57	49	77	29	66	480	27	43	46	68	7	37	21	45	37	73
74	89	42	62	25	57	48	76	30	69	490	26	42	45	60	7	30	19	44	37	65
74	89	42	62	26	57	48	74	31	71	500	25	41	45	60	6	30	18	35	37	66
74	89	42	56	27	49	47	73	32	72	510	24	40	45	60	5	30	16	34	38	66
73	88	42	56	27	50	47	66	33	65	520	23	39	45	61	4	29	15	33	38	67
73	88	42	56	28	50	47	66	34	65	530	22	38	45	62	3	29	14	32	38	67
72	80	41	56	29	50	46	66	34	65	540	21	37	45	62	2	19	13	31	38	58
70	78	40	55	29	50	46	66	35	65	550	20	28	45	62	1	18	11	23	37	58
69	76	39	53	29	43	46	65	35	65	560	19	28	45	62	1	17	10	22	36	57
67	73	37	51	29	42	45	65	36	59	570	18	28	44	54	1	16	8	21	36	57
65	71	35	49	28	42	44	57	36	59	580	16	27	43	54	0	16	7	20	36	50
62	68	33	47	28	41	43	57	37	59	590	14	26	42	53	0	15	6	19	36	50
59	64	32	40	27	40	42	57	37	59	600	12	24	41	52	0	15	5	18	36	51
56	61	30	39	26	40	42	57	37	59	610	8	22	39	51	0	14	5	18	36	51
52	57	29	36	26	39	41	57	37	51	620	5	18	37	50	0	14	4	17	36	51
48	54	27	34	25	39	41	57	37	51	630	1	14	35	48	0	5	4	11	35	51
43	50	24	31	23	38	41	57	37	50	640	0	10	34	46	0	5	3	11	35	51
38	45	21	28	22	36	41	57	37	49	650	0	5	32	44	0	5	2	10	34	42

Growth Targets for ELA SC READY										Prior Year Score	Growth Targets for Math SC READY									
Grade 4		Grade 5		Grade 6		Grade 7		Grade 8			Grade 4		Grade 5		Grade 6		Grade 7		Grade 8	
MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT		MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT	MAT	AVT
33	41	17	25	20	28	41	56	36	48	660	0	5	30	41	0	5	0	9	33	41
28	36	13	21	18	26	41	47	35	46	670	0	5	27	38	0	5	0	7	32	41
22	31	9	17	16	24	40	47	33	45	680	0	5	25	35	0	5	0	6	31	41
16	26	4	12	14	21	39	47	32	44	690	0	5	22	32	0	5	0	5	30	40
10	20	0	7	12	19	38	46	30	42	700	0	5	20	28	0	5	0	5	29	39
4	14	0	5	9	16	36	44	28	34	710	0	5	17	25	0	5	0	5	28	38
0	8	0	5	6	13	34	42	26	33	720	0	5	14	21	0	5	0	5	27	37
0	5	0	5	3	9	32	39	24	31	730	0	5	11	17	0	5	0	5	26	35
0	5	0	5	0	6	29	36	21	28	740	0	5	7	13	0	5	0	5	25	33
0	5	0	5	0	5	25	32	17	25	750	0	5	3	8	0	5	0	5	23	31
0	5	0	5	0	5	21	28	13	21	760	0	5	0	5	0	5	0	5	22	28
0	5	0	5	0	5	17	23	9	17	770	0	5	0	5	0	5	0	5	20	26
0	5	0	5	0	5	13	18	4	12	780	0	5	0	5	0	5	0	5	18	23
0	5	0	5	0	5	8	13	0	7	790	0	5	0	5	0	5	0	5	16	21
0	5	0	5	0	5	3	8	0	5	800	0	5	0	5	0	5	0	5	13	18
0	5	0	5	0	5	0	5	0	5	810	0	5	0	5	0	5	0	5	11	16
0	5	0	5	0	5	0	5	0	5	820	0	5	0	5	0	5	0	5	7	13
		0	5	0	5	0	5	0	5	830			0	5	0	5	0	5	4	11
		0	5	0	5	0	5	0	5	840			0	5	0	5	0	5	0	9
		0	5	0	5	0	5	0	5	850			0	5	0	5	0	5	0	7
				0	5	0	5	0	5	860					0	5	0	5	0	5
				0	5	0	5	0	5	870					0	5	0	5	0	5
						0	5	0	5	880							0	5	0	5
						0	5	0	5	890							0	5	0	5
						0	5	0	5	900							0	5	0	5
								0	5	910									0	5
								0	5	920									0	5