2022 A-F Letter Grade Accountability System: Traditional Schools Business Rules

9-12 Model

Last Updated December 15, 2021

Modified and Annotated Based on the Impact of COVID-19

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Contents

Introduction

These business rules detail Arizona's 2022 A-F Traditional 9-12 Schools Letter Grade Accountability System for educators, parents, and other stakeholders. The Arizona Department of Education's (ADE) mission is equity for all students to achieve their full potential. As a state, we are also committed to holding schools accountable to this goal using a fair accountability model that differentiates the performance of schools.

Using the A-F Letter Grade Accountability System, Arizona makes annual accountability determinations for schools based on student academic outcomes, subgroup improvement, graduation rate, and college and career readiness. The accountability system outlined here uses several metrics to measure student learning and growth in Arizona traditional 9-12 public schools.

Legislation Considerations: The FY 2022 A-F Business rules will remain in draft form until the close of the 2022 legislative session, as there are legislative items being considered by the Arizona 2022 Legislators that may affect the 2022 A-F Accountability models. Please note that if there is impact to the models, they will be noted and communicated clearly to the field.

Business Rules

Once the Arizona State Board of Education approves the A-F Letter Grade Models for a given fiscal year, business rules that reflect the approved model are created and shared with stakeholders on the Accountability & Research website (http://www.azed.gov/accountability-research/resources/). Following the calculation of A-F Letter Grades, corresponding release by the State Board of Education, and conclusion of the appeals process, the ADE Accountability team adds descriptive statistics and graphs at which point the business rules are finalized.

Prior to the finalization of the business rules, some changes may occur including small edits to the text (e.g., punctuation, spelling, formatting, etc.), clarifications to the description of components and the addition of details (i.e., statewide averages). A footer appears on each page that contains the date on which the business rules were most recently updated. In addition, the last page includes a date and brief description of each change that occurs.

The Accountability & Research team will continue to post the most updated document as quickly as possible for stakeholders. To ensure you are using the most up to date version, you should bookmark the applicable link from our website as opposed to saving or printing a copy.

Overview of the A-F Letter Grade Accountability System

As outlined by A.R.S. §15-241, the State Board of Education (SBE) determined the criteria for each school classification. Details regarding A-F and the process can be found at https://azsbe.az.gov/f-school-letter-grades. The following outlines the traditional school model that was approved on December 13, 2021.

The A-F Letter Grade accountability system includes the following:

1. Percentage of proficient students on the state administered ACT and Multi-State Alternate Assessment
2. Longitudinal indicators of relative student gain and growth
3. EL proficiency and growth
4. Graduation rate
5. Indicators to measure students' readiness to succeed in a career or post-secondary enrollment.

Per A.R.S. §15-241 (b), "Each school, charter holder and school district shall submit to the department any data that is required and requested and that is necessary to compile the achievement profile. A school or local education agency that fails to submit the information that is necessary is not eligible to receive monies from the classroom site improvement fund established by section 15-977". The complete A.R.S. §15-241 is available here: https://www.azleg.gov/ars/15/00241.htm.

Data Inclusion Criteria

ACT, MSAA, AzSCI, and AZELLA data were used in the letter grade calculation after validation against the statewide Arizona Education Data Standards (AzEDS). Using the student's AzEDS identification as the unique identifier, integrity checks consider valid student enrollment and accurate student identification on test date relevant to the grade level and subject tested.

The following criteria outline specific details and descriptions of student data included in the calculation of the A-F Letter Grades for schools.

1-year FAY (Full Academic Year) – Students were included in the proficiency and subgroup proficiency improvement metrics of the A-F Letter Grade models if they were enrolled within the first ten school days of the school's calendar year and continuously enrolled until the first week day in May (May 2, 2022). Students with breaks in enrollment fewer than 10 calendar days in the same school are still considered FAY.

ACT – The American College Test (ACT) is the approved statewide assessment for students in Grades 9-12. The ACT is administered to students in Grade 11 during the spring testing window. While students may take the ACT multiple times, accountability measures are calculated using only the ACT that was administered to students in Grade 11 as part of the state's statewide assessment.

ACT ELA performance results are based off a composite of a student's ACT English, ACT Reading, and ACT Writing tests.

AZELLA FAY – Students were included in the EL calculations if they were enrolled within the first ten school

days of the school's calendar year and continuously enrolled until the last day of the state testing window for AZELLA. Students with breaks in enrollment fewer than 10 calendar days in the same school are still considered AZELLA FAY.

AOI FAY — Students that attend AOIs are FAY students if they log enough minutes at the AOI. Students in grades 9-12 must log 32,400 minutes at an AOI school to be considered FAY.

Current Year – refers to Fiscal Year 2022

EL_FEP – Any student identified with an EL need in Fiscal Year 2022 in addition to any student identified as Fluent English Proficient 1, 2, 3, or 4 years ago.

English Learner (EL) – Any student identified with an EL need

- with a less than proficient score on AZELLA in the current or prior fiscal year
- students that may have been identified during the pandemic based on the Home Language Survey

English Learner Cohort – Any student identified with an EL need (e.g., with a less than proficient score on the AZELLA) any time during high school.

Ethnicity – Student data submitted via AzEDS in the ethnicity fields (i.e., White, African American, Hispanic, Native American/Alaskan Indian, Asian, or Pacific Islander) is used for the subgroup calculations.

Fluent English Proficient – Any student identified with an EL need in a prior fiscal year who has reclassified as Proficient on the AZELLA 1, 2, 3, or 4 years ago.

Homeless Cohort – Any student who was identified as homeless during high school.

Income Eligibility 1 & 2 – Student data submitted via AzEDS in the IncomeEligibility1 and IncomeEligibility2 fields are used to define an Income Eligibility 1 & 2 student. A student is defined as Income Eligibility 1 & 2 if the school submits a 1/yes for either the IncomeEligibility1 or IncomeEligibility2 field.

New School – a school created in the 2021-2022 school year with a new entity ID. These schools will not receive an A-F letter score grade their first year in existence.

N-Size – The minimum number of students required for the indicator to be calculated and the school eligible to earn the points. The N-Size for all indicators is 10 students.

Parent in Military – Student data submitted via AzEDS in the Parent in Military field.

Prior Year – Refers to Fiscal Year 2021.

Recently Arrived English Learner (RAEL) – A RAEL in the current year is a student who meets the following

data criteria: 1) is new to Arizona schools as determined by having his/her first enrollment ever in an Arizona school and 2) is not proficient in English as determined by a less than proficient result on the AZELLA.

Special Education Cohort – Any student who received special education services during high school.

Special Education Student – Any student receiving special education services on October 1, 2021 as defined by Federal law. To confirm whether a student meets this criterion, schools can check their SPED07 report in the ESS Census Application. Information regarding the ESS Census process can be found here: http://www.azed.gov/specialeducation/data-management/federal-sped-census/

The table below describes the grade-level and FAY requirements for each indicator of the A-F Letter Grade Accountability System.

Indicator	Component	FAY	Grades	Cohort/Year (if applicable)
Proficiency	**ACT ELA and Math**	✓	11	
	MSAA ELA and Math	✓	11	
Growth	**Student Growth Percentiles (SGPs)**	✓	Cohort 2023 (all students in Cohort 2023 regardless of enrolled grade, typically 11th grade)	
EL	**EL Proficiency and Growth**	✓	9-12	
Graduation Rate	**4-year Graduation rate**		12	Cohort 2021
	5-year Graduation rate		12	Cohort 2020
	6-year Graduation rate		12	Cohort 2019
	7-year Graduation rate		12	Cohort 2018
College and Career Readiness	**Career and College Readiness Self-Report**		9-12	2022 Cohort that were enrolled by October 1 and continuously enrolled until May 1 or graduated early in the current or a prior fiscal year.
Bonus	**Science Proficiency**	✓	11th grade students assessed in the current school year	
	Special Education Enrollment	✓	9-12	
	Enrollment in Post-secondary/military		9-12	Cohort 2020 and Cohort 2021
	ACT Aspire		9	Cohort 2025

Regardless of a student's special education status, the accountability system uses all verified ACT Statewide administration data from students enrolled the full academic year. For students who take the MSAA assessment and are enrolled the full academic year, these data are used in the Proficiency component but not in the calculation of student growth percentiles (Growth).

Students with a performance level reported from the ACT English Language Arts and Mathematics assessments, MSAA, and AzSCI or MSAA Science Test are utilized in certain calculations (detailed below). The department does not include ACT, MSAA, AzSCI or MSAA Science Test records for students where no answer items are selected and no scale score or performance level is assigned. The following table indicates the only valid performance levels on ACT or MSAA at all grade levels and for all subjects.

ACT/MSAA Achievement Levels	AzSCI Achievement Levels	MSAA Science Achievement Levels
Minimally Proficient (1)	Pending	Pending
Partially Proficient (2)		
Proficient (3)		
Highly Proficient (4)		

A-F Static File

The A-F static file merges assessment data with enrollment data from AzEDS to serve as the base for the majority of A-F Letter Grade calculations and to help schools understand performance based on various accountability-related business rules (i.e. FAY). Students are included in a school's static file if they meet any of the below criteria:

- Enrolled on the first day of the Spring AzSCI Test Window (March 21, 2022)
- Enrolled on the first day of the Spring AASA State Test Window (April 4, 2022)

Data in the Growth Model

Valid student assessment results must meet three criteria for inclusion in the growth model:

1. Student enrollment generates ADM in any Arizona public school (i.e., tuition payer code equal to 1 or FTE greater than 0).
2. Student has a test record from the 2021-2022 school year.
3. Student also has a test record from the 2020-2021 school year in the same subject.

Only test records which can be matched to a valid student enrollment are included in the accountability system. Test records with unverifiable information such as missing AzEDS ID numbers are excluded. To build the growth model, the ADE includes test records from students considered non-FAY at the time of testing. The growth model restricts the academic peer groups as much as possible to only students who are receiving a public education from an Arizona school that teaches grade level standards.

Timeline & Appeals

Information will be added once determined by the Arizona State Board of Education.

Cut Scores

- 9-12 Letter Grade model is used for schools that serve grades 9 through 12 (or any configuration within that such as 10-12, 9-11, etc.). 9-12 schools eligible for 50 or more of the 100 total points

available will receive a letter grade.

- Due to the fact that schools can earn a different amount of points, cut scores for letter grades for all models were established on percentages. Percentage Earned = Total Points Earned (excluding bonus points) / Total Points Eligible.

A	B	C	D	F
TBD	TBD	TBD	TBD	TBD

Pursuant to A.R.S. § 15-241.02(D), schools that receive three consecutive D's "shall be assigned a letter grade of F unless an alternate letter grade is assigned after an appeal…". Schools receiving a third "D" letter grade were assigned a "D" in the initial release of A-F Letter Grades. If the school did not file an appeal of their grade, it was be changed to an F following the close of the A-F Letter Grade Appeal window.

2022 A-F Traditional School Letter Grade Models

The Traditional Schools 9-12 A-F Letter Grade Model aims to fairly and accurately depict a school's accountability determination in a manner which complies with state statute, State Board Rule, as well as other accountability requirements.

Schools serving grades 9 through 12 or any configuration within (e.g., 9-10, 10-12, 9-11, etc.) will be evaluated on the 9-12 model. Non-Typical school configurations, those that serve grades K-12, 1-12, 2-12, 6-12, etc., are graded on both the K-8 and 9-12 models. Approved Alternative Schools will be graded on the Alternative School Model. Small schools with fewer than 10 FAY students, or schools not eligible for enough of the total 100 points (50 for 9-12) will be Not Rated.

N-Size

The 9-12 Traditional School model requires schools to have 10 FAY students in each indicator to be eligible to earn the points. Exceptions to this rule are:

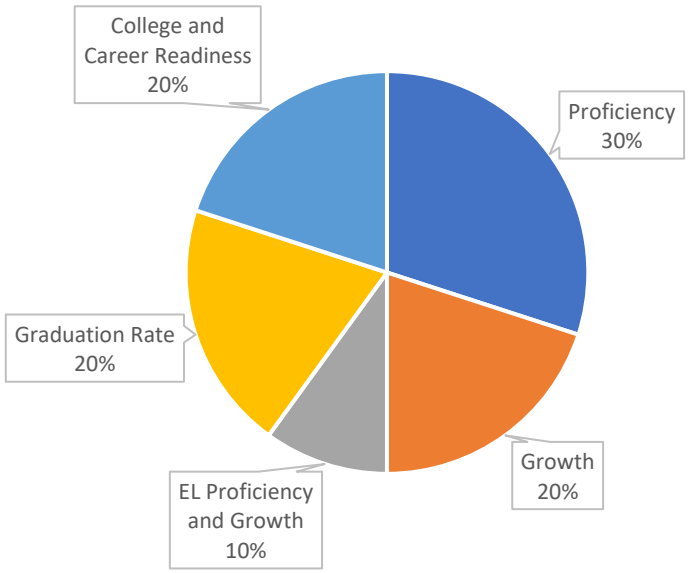
- Graduation rate – requires 10 students (FAY and non-FAY in the 4-year cohort)
- CCRI – requires 10 students in Cohort 2022
- Special Education enrollment bonus points does not require N-Size of 10

Schools that do not meet the minimum N-Size of 10 FAY students cannot earn points for that indicator.

RAEL

Recently Arrived English Learner (RAEL) students in year 1 and year 2 are excluded from proficiency calculations for ELA only.

9-12 Model



Weight	Indicators
30%	Proficiency on Statewide Assessment
20%	Growth
10%	Proficiency and Growth - English Language Learners
20%	Graduation Rate
20%	College and Career Readiness

The 9-12 model is based on a scale of 0-100 points for schools that have all available indicators; the scale is adjusted for those indicators that do not meet the N-Size. All indicators must have a minimum of 10 FAY students to count with above exceptions. All indicators are capped at the total percent possible.

The following school configurations are graded on the 9-12 model:

- 9-12
- Configurations within 9-12
  - 9-10
  - 9-11
  - 10-12
  - 10-11
  - 11-12
  - Etc.

Proficiency

Proficiency results are worth 30% of a 9-12 school's letter grade. The 2022 ACT or MSAA ELA and Math scores are utilized for grade 11 FAY students. Schools must have a minimum of 10 FAY students to be eligible for points. If a student took the same assessment twice, the higher score is utilized. Invalid test records count as not tested.

Proficiency points are capped at 30. The achievement levels are weighted such that students scoring highly proficient earn the most points (see below).

$$\textbf{Grades 9 - 12 \% Tested} = 100\left[\frac{0.5\ (No.\ of\ students\ tested\ in\ ELA + No.\ of\ Students\ Tested\ in\ Math)}{(No.\ of\ students\ enrolled\ in\ grade\ 11\ on\ the\ first\ day\ of\ the\ AASA\ State\ Testing\ Window)}\right]$$

Achievement Level	Point Value
Minimally Proficient (1)	0
Partially Proficient (2)	0.6
Proficient (3)	1.0
Highly Proficient (4)	1.3

Percent Tested

Proficiency calculations are impacted by percent tested. Schools that do not meet the 95% test threshold mandated by law are negatively impacted on the proficiency calculation. Students may be taking the ACT or the MSAA assessments in grades 11 (Cohort 2023). Thus, if a student tested on one of these assessments in the 2022 Spring testing window, they would count as tested.

The below percent tested formula is used:

In Fiscal Year 2022, the first day of the AASA State Testing Window is April 4, 2022.

Percent Proficient for Schools that Meet 95% Tested

$$\textbf{\% Proficient for Schools Meeting 95\% Tested} = 100\left(\frac{\left[\begin{array}{c}(No.\ of\ FAY\ students\ PP\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.\ of\ FAY\ students\ PP\ on\ ACT\ Math\ or\ MSAA\ Math)0.6) \\ +(No.\ of\ FAY\ students\ P\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.\ of\ FAY\ students\ P\ on\ ACT\ Math\ or\ MSAA\ Math)1.0) \\ +(No.\ of\ FAY\ students\ HP\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.\ of\ FAY\ students\ HP\ on\ ACT\ Math\ or\ MSAA\ Math)1.3)\end{array}\right]}{No.\ of\ FAY\ students\ tested\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.\ of\ FAY\ students\ tested\ on\ ACT\ Math\ or\ MSAA\ Math)}\right)$$

Schools that do not meet 95% tested will see an increase in the denominator of their proficiency calculation. The total number of students added to the denominator (and thereby included in the numerator as 0) equals the number of students needed to meet the 95% test threshold.

Example: A school was supposed to test 100 students. They tested 92. The school needed to test 95 students to meet or exceed the 95% test threshold. Because they did not meet the threshold we do the following:

- Number of students needing to test to meet 95% – number of students actually tested

The number generated from the above formula is then added to the proficiency calculation denominator

(see formula below).

Percent Proficient for Schools that DO NOT Meet 95% Tested

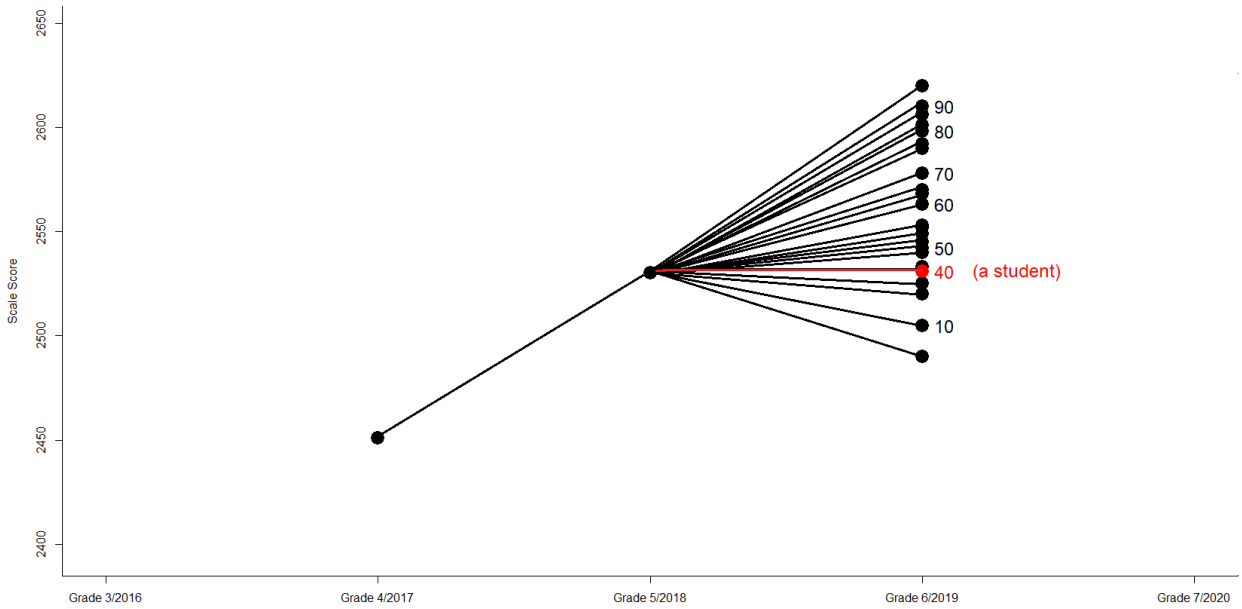
$$\%\ \boldsymbol{Proficient\ for\ Schools\ DO\ NOT\ Meet\ 95\%\ Tested}$$
$$= 100\left(\frac{\begin{bmatrix}(No.\ of\ FAY\ students\ PP\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.\ of\ FAY\ students\ PP\ on\ ACT\ Math\ or\ MSAA\ Math)0.6)\\ +(No.of\ FAY\ students\ P\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.of\ FAY\ students\ P\ on\ ACT\ Math\ or\ MSAA\ Math)1.0)\\ +(No.of\ FAY\ students\ HP\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.of\ FAY\ students\ HP\ on\ ACT\ Math\ or\ MSAA\ Math)1.3)\end{bmatrix}}{\begin{matrix}(No.of\ FAY\ students\ tested\ on\ ACT\ ELA\ or\ MSAA\ ELA + No.of\ FAY\ students\ tested\ on\ ACT\ Math\ or\ MSAA\ Math)\\ +2(No.of\ Students\ needed\ to\ Meet\ 95\%\ tested)\end{matrix}}\right)$$

Arizona Growth Model

Arizona utilizes the Student Growth Percentile (SGP) model to assess students' academic growth (Betebenner, 2011). A Student Growth Percentile describes the growth of a student based on his/her current year test score compared with the current year test scores of those students with the exact same prior test scores – his/her academic peers. A student demonstrates higher growth when his/her current-year test scores are higher than most of his/her academic peers, and lower growth when his/her current-year test scores are lower than most of his/her academic peers. To achieve this goal, the model employs quantile regression that relates the prior scores of each grade by subject cohort with their current-year scores. The growth model includes only academic achievement data; it does not control for student demographic information or subgroup membership.

The SGP model provides two growth indicators: The Student Growth Percentile (SGP) and the Student Growth Target (SGT).

An SGP describes the "ACTUAL" growth a student made in a school year by comparing a student's current-year test score with the current-year test scores of his/her academic peers. An SGP of 40 means that the student grew more than 40% of his/her academic peers in a school year.



Student Growth Percentile for an example student in the cohort "Grade 4/2017, Grade 5/2018, Grade 6/2019"

An **SGT** is the "EXPECTED" growth a student ought to exhibit in the year to achieve a future target in a pre-determined time frame. In the 2018-2019 school year, there were two pre-established targets: 'Proficient' and 'Highly Proficient'. The time frame to reach the target was determined arbitrarily as within (or across) the next three years beyond the current year or by high school graduation, whichever comes first.
For students who were at the 'Minimally Proficient' performance level and the 'Partially Proficient' performance level in the prior year, their SGTs were the minimum growth they need demonstrate from the prior year to the current year to be on track to reach the target of 'Proficient' within the next three years. They were labeled as 'Catch-Up' students.

There were two targets for students who were at the 'Proficient' performance level and the 'Highly Proficient' performance level in the prior year. Their first target was the minimum growth they need to demonstrate from the prior year to the current year to remain above the target of 'Proficient' across the next three years. These students were therefore labeled as 'Keep-Up" students. For the students who were currently proficient, the second SGT was the minimum growth they need to demonstrate to move up to the 'Highly Proficient' level within the next three years. They were also labeled as "Move-Up" students. For the students who were currently highly proficient, the second SGT was the minimum growth they should demonstrate to remain at the highest performance level across the next three years. They were also labeled as "Stay-Up" students.

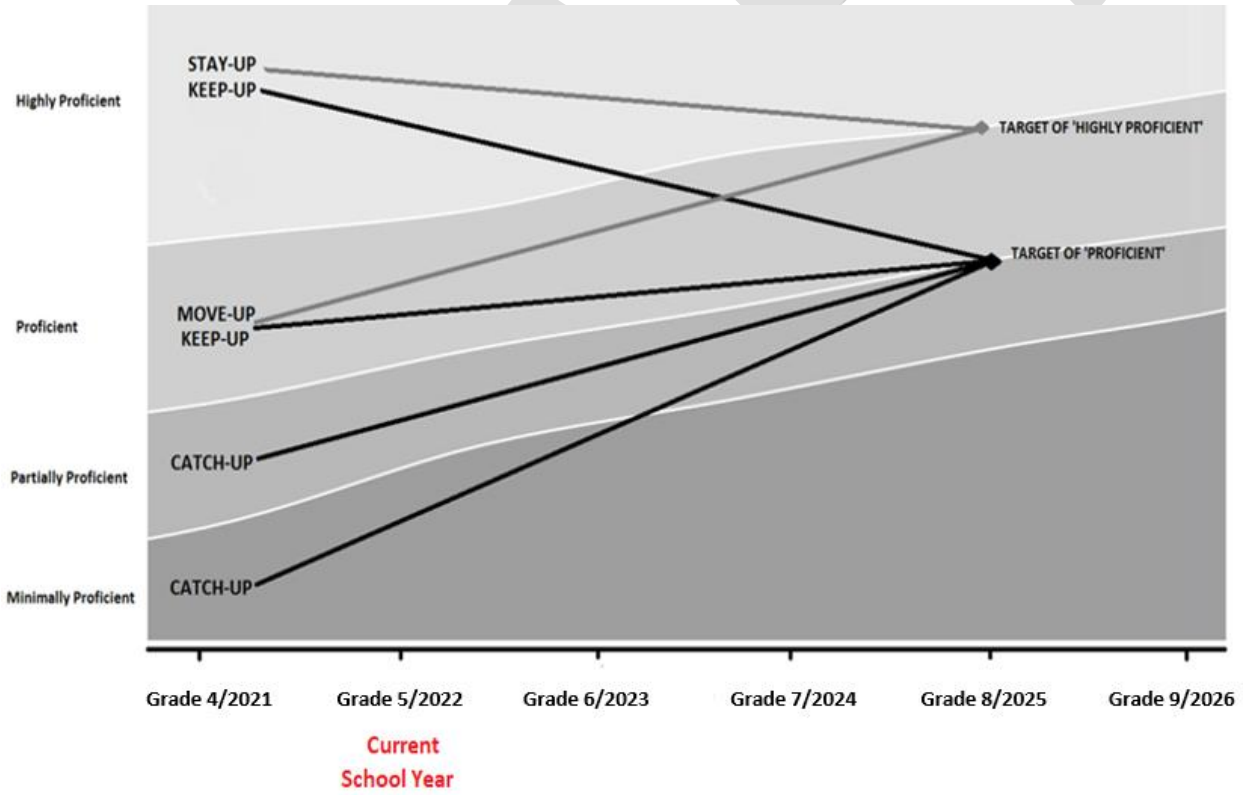


Illustration of the Student Growth Target for a student in grade 5 in the 2018-2019 school year

Growth Model for the 2021-2022 School Year

In the 2021-2022 school year, Arizona is going to administer Arizona's Academic Standards Assessment (AASA) for students in grades 3-8, ACT Aspire, and ACT for students in high school. The transition to the new

statewide achievement assessments and the lasting impact of the pandemic poses new challenges for the use of the growth model in the 2021-2022 school year, which requires additional research and validation before enough confidence can be put in the growth data of this year.

The table below lists the assessments administered or scheduled to be administered in the 2018-2019 school year, the 2020-2021 school year, the 2021-2022 school year, and the 2022-2023 school year. The statewide achievement assessments were cancelled in the 2019-2020 school year due to the COVID-19 pandemic.

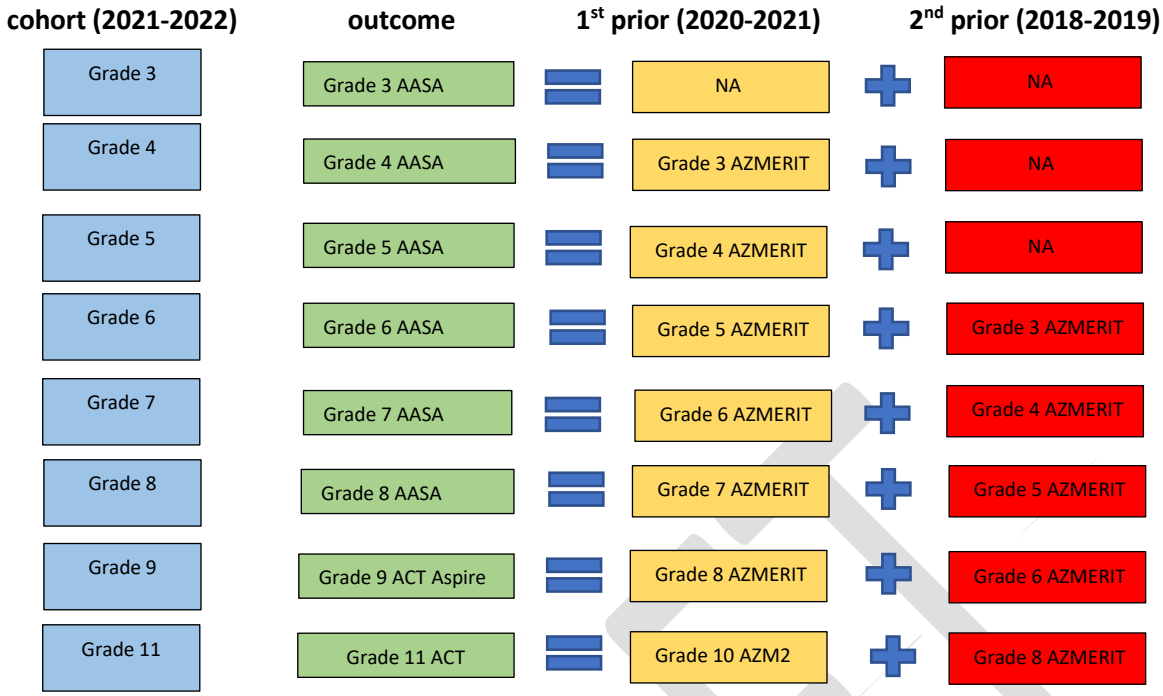
School Year	Grades 3-8	Grade 9	Grade 10	Grade 11
2018-2019	AZMERIT	AZMERIT EOC/ Menu of Assessment	AZMERIT EOC/ Menu of Assessment	AZMERIT EOC/ Menu of Assessment
2019-2020	N/A	N/A	N/A	N/A
2020-2021	AZMERIT		AzM2	
2021-2022	AASA	ACT Aspire		ACT
2022-2023	AASA	ACT Aspire		ACT

Student Growth Percentile (SGP) for the 2021-2022 School Year

The 2021-2022 school year will be the first school year when we are going to link the ACT scores or the ACT Aspire scores with the historical scores from AZMERIT or AZM2 to produce the growth data for high school students. In addition, in the school years before the pandemic, the growth model links the current-year scores of each grade by subject cohort with their scores from the immediate prior year and from the second prior year if available. In the 2020-2021 school year, the current-year scores were linked to the scores from the 2018-2019 school year and from the 2017-2018 school year with the scores from the 2019-2020 school year being skipped. In the 2021-2022 school year, the scores from the current school year and the first prior year (2020-2021) are available, but the scores from the second prior year are absent as the statewide achievement assessments were cancelled in the 2019- 2020 school year. A few key questions then arise about an appropriate way to construct the growth model in this school year:

1. Will the linkage of the ACT or ACT Aspire scores to the historical scores from AZMERIT or AZm2 produce a good enough model fit? When the model fits the data perfectly, a low performing student and a high performing student will have an equal chance to receive a high SGP as well as a low SGP. Notable deviations from this ideal situation would be an indication of poor model fit.
2. Will the growth model that links the current-year scores only to the scores from the immediate prior year fit the data well?
3. Will the inclusion of the scores from the 2018-2019 school years as a second prior score improve the model fit?
4. Will the inclusion of the scores from the 2018- 2019 school years as a second prior score put these schools that serve higher grades a more/less favorable position than their counterparts that serve lower grades?

These questions need to be answered by impact data before the optimum model can be decided for the 2021-2022 school year. The table below details the score history that could be possibly included in the model for each grade in the 2021-2022 school year.



Student Growth TARGET (SGT) for the 2021-2022 School Year

The Student Growth Target (SGT) can be set up prospectively as the expected growth a student needs to make in the NEXT school year in order to be proficient or highly proficient in the predetermined time frame, it can also be set up retrospectively as the expected growth a student needs to make in the CURRENT school year in order to be proficient or highly proficient in the predetermined time frame. This retrospective SGT can be compared to the SGP to determine if a student is on track to be proficient or highly proficient. Arizona has been using the retrospective SGT together with the SGP for state accountability, and the prospective SGT has been released to schools for the purpose of guiding instruction in the coming school year. The table below lists the retrospective SGT and the prospective SGT for students in each grade in the 2021-2022 school year. To simplify the demonstration, this table uses "being proficient" as the target. The predetermined time frame is in the next three years or by grade 11 as grade 11 is the last chance for students to take the statewide achievement assessments. This is the time frame Arizona has been using for years to determine the SGT.

Cohort(2021-2022)	retrospective SGT for the 2021-2022 school year	prospective SGT for the 2022-2023 school year
Grade 3	NA	the sufficient growth the student needs to make in the 2022-2023 school year to reach proficiency by grade 7
Grade 4	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 7	the sufficient growth the student needs to make in the 2022-2023 school year to reach proficiency by grade 8
Grade 5	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 8	the sufficient growth the student needs to make in the 2022-2023 school year to reach proficiency by grade 9
Grade 6	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 9	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 11
Grade 7	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 11	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 11
Grade 8	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 11	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 11
Grade 9	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 11	the sufficient growth the student needs to make in the 2022-2023 school year to reach proficiency by grade 11
Grade 11	the sufficient growth the student needs to make in the 2021-2022 school year to reach proficiency by grade 11	NA

The retrospective SGT requires a new statewide achievement assessment to be administered for at least two school years. AASA is expected to have the same standards, the same scale, as well as the same cut scores as AZMERIT. Therefore, if the time frame for students to be proficient remain the same, we may be able to produce the retrospective SGTs for the students in grades 4 and 5. However, the SGTs for the students beyond grade 5 are the sufficient growth for them to reach proficiency by grade 9 or grade 11 when they are going to take ACT Aspire or ACT. ACT Aspire and ACT are the assessments different from AZMERIT or AZM2 and the 2021-2022 school year will be the first school year we administer the two assessments as the statewide achievement assessments for high school students. It is for certain that we will not be able to produce the retrospective SGTs for the students in grade 6 and beyond for the 2021-2022 school year. It is wise, therefore, not to recommend the use of the retrospective SGT for state or federal accountability in the 2021-2022 school year.

We should still be able to produce the prospective SGTs for every student in grades 3-9 for the upcoming 2022-2023 school year and release them to schools for the purpose of guiding classroom instruction. The academic performance of all the students in Arizona has been largely impacted by the pandemic and the prospective SGTs will be an important tool for us to gauge if we are on track to bring students back to where they were. If the prospective SGTs for the 2022-2023 school year indicate that most students will be expected to make an unrealistically high growth in order to be proficient or highly proficient in the next three years or by grade 11, either the targets or the time frame to reach the targets need to be adjusted.

Calculation of Growth Score for the 2021-2022 School Year

Only the SGPs of FAY students contribute to the school's growth score. A categorical evaluation of school growth is used to obtain the growth score of all students in a school. To do this, the SGPs of FAY students are classified into three levels ranging from low to high:

L= Low (SGP 1-33)
A= Average (SGP 34-66)
H= High (SGP 67-99)

Then the percentage of students at the school level, using all grades, is calculated separately for each subject (English Language Arts and Mathematics) and for each of the categorical growth bands defined by the students' prior-year achievement level and current-year SGP growth level. The percentages are then weighted differently in the following ways:

Current-Year Student Growth Percentile			
Prior-Year Achievement Level	Weights		
Highly Proficient (HP)	0	1.00	1.00
Proficient (P)	0	1.00	1.20
Partially Proficient (PP)	0	1.00	1.80
Minimally Proficient (MP)	0	1.00	2.00
	1-33	34-66	67-99
	Low Growth	Average Growth	High Growth

The formula for the overall score of a school for each subject is:

$$\textbf{The SGP points of a school for each subject} = \begin{pmatrix} (\%\ of\ PY\ MP\ FAY\ students\ who\ made\ high\ growth\ x 2.00) \\ +(\%\ of\ PY\ PP\ FAY\ students\ who\ made\ high\ growth\ x 1.80) \\ +(\%\ o\ fPY\ P\ FAY\ students\ who\ made\ high\ growth\ x\ 1.20) \\ +(\%\ of\ PY\ HP\ FAY\ who\ made\ high\ growth\ x\ 1.00) \\ +(\%\ of\ PY\ (MP + PP + P + HP)\ who\ made\ average\ growth) \end{pmatrix}$$

$$\textbf{Total Growth Points} = 100(0.25x(SGP\ Math) + 0.25\boldsymbol{x(SGP\ ELA)})$$

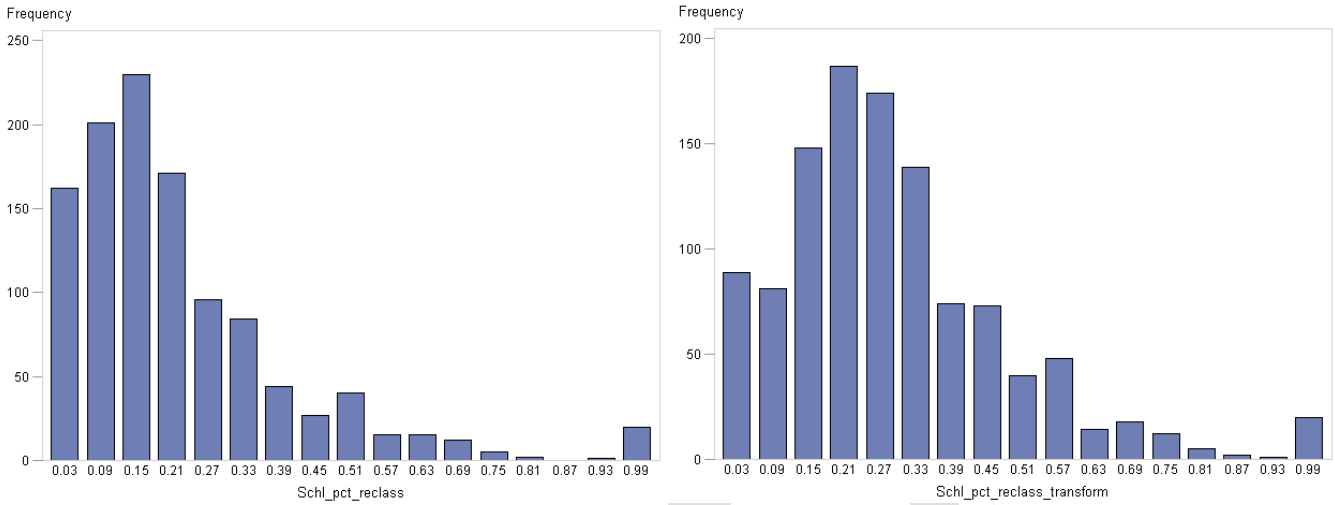
Normalizing (Transforming) EL Data

While ideally all data would be normally distributed, most data is not. Normally distributed data means when visualized through a histogram that data is bell-curve shaped. Further, the mean (average) and median (the midpoint of the data) of the data are approximately the same. When data does not have a normal distribution, this is called a non-normal distribution. When data has a non-normal distribution, data can be "transformed" to have a normal distribution. Below is an example of non-normally distributed data and the same data that has been transformed to have a normal distribution.

Data transformation means applying the same mathematical operation to each piece of the original data. The transformation process changes every school and student in the same way. A variety of statistical methods are used for normalizing data based upon which approach provides a distribution as close as possible to normal.

Once transformed, the relationship between data points does not change, but the relationship across data points does. Transformation modifies all the data, in the same way, to normalize the distribution as much as possible. Individual school or student performance is not damaged or improved during the transformation process.

Data is normalized for two reasons. First, most statistical methods used to analyze data include an assumption of a normal distribution. For potential analysis to be as accurate as possible, data needs to have as close as possible to a normal distribution. Second, letter grade scores are a combination of several indicators. For the combined letter grade to be as accurate as possible, all data included in the grade calculation needs to approximately have a normal distribution.



EL Proficiency and Growth

English Learner proficiency and growth is worth 10% of a 9-12 school's letter grade. Schools must have a minimum of 10 AZELLA FAY students to be eligible for the points. EL proficiency is worth 5% and EL growth is worth 5%.

EL calculations include students in grades 9-12 with an EL need (e.g., with a less than proficient score on AZELLA in the current or prior fiscal year), including recent arrivals. EL calculations also include students who reassess as proficient outside of the Spring AZELLA testing window in addition to those that do so during the testing window. EL students must also be AZELLA FAY. To be included in the EL growth calculations, two test records are required. Invalid test records count as not tested. Schools with less than 10 AZELLA FAY EL students are not eligible for these points. EL proficiency calculates the proficiency percentage of EL students. The following formula is used.

$$\boldsymbol{EL\ School\ Proficiency}\ \% = 100\left[\frac{(No.\ of\ AZELLA\ FAY\ students\ proficient\ on\ AZELLA)}{\begin{array}{c}(No.\ of\ AZELLA\ FAY\ students\ with\ an\ EL\ need, including\ parent\ withdrawals,\\ who\ had\ a\ valid\ current\ AZELLA\ proficiency\ level)\end{array}}\right]$$

To earn proficiency points, the school's EL proficiency percentage is compared to the State's current year proficiency percentage.

$$\boldsymbol{EL\ 9-12\ Statewide\ CY\ \ Proficiency}\ \% = 100\left[\frac{(Sum\ of\ School\ Averages\ that\ have\ the\ necessary\ AZELLA\ FAY\ n-count)}{(No.\ of\ Schools\ that\ have\ the\ necessary\ AZELLA\ FAY\ n-count\ to\ be\ eligible\ for\ points)}\right]$$

Up to 5 points are awarded for proficiency using the following system:

STANDARDIZED	Range	Points
EL Proficiency is greater than or equal to the EL statewide mean current year percent proficient.	TBD	5
EL Proficiency is 0.01 to 0.50 standard deviations below the EL statewide mean current year percent proficient.	TBD	4
EL Proficiency is 0.51 to 1.00 standard deviations below the EL statewide mean current year percent proficient.	TBD	3
EL Proficiency is 1.01 to 2.00 standard deviations below the EL statewide mean current year percent proficient.	TBD	2
EL Proficiency is 2.01 to 3.00 standard deviations below the EL statewide mean current year percent proficient.	TBD	1
If a school's EL Proficiency is 0%, due to no reclassification.	TBD	0

EL growth calculates the growth percentage of EL students using their current year compared to prior year AZELLA results. In addition, any student who takes a placement exam for the first time by October 1st and then takes a spring reassessment will be included. Students who had a placement exam in one school and a reassessment in another school within the same school year will not be included as they will not qualify as AZELLA FAY.

The table below shows how many points each level of growth is worth.

Prior Year Achievement Level	Current Year Achievement Level	Point Value
Basic/Intermediate	Intermediate	1
Pre-Emergent/Emergent	Basic	
Basic	Intermediate	
Intermediate	Proficient	
Pre-Emergent/Emergent	Intermediate	2
Basic/Intermediate	Proficient	
Basic	Proficient	
Pre-Emergent/Emergent	Proficient	3

The following formula is used to calculate growth:

$$\textbf{\textit{EL School Growth}}\ \% = 100\left[\frac{\begin{pmatrix}(No.\ of\ AZELLA\ FAY\ students\ who\ increased\ one\ proficiency\ level)\\ +(No.\ of\ AZELLA\ FAY\ student\ who\ increased\ two\ proficiency\ levels\ x\ 2.0)\\ +(No.\ of\ AZELLA\ FAY\ students\ who\ increased\ three\ proficiency\ levels\ X\ 3.0)\end{pmatrix}}{\begin{matrix}No.\ of\ AZELLA\ FAY\ students\ tested\ with\ an\ EL\ need,\ including\ parent\\ withdrawals\ with\ a\ valid\ current\ and\ prior\ year\ AZELLA\ proficiency\ level\end{matrix}}\right]$$

To earn growth points, the school's EL growth percentage is compared to the State's current year growth percentage.

$$\textbf{\textit{EL 9}} - \textbf{\textit{12 Statewide Current Year Growth Percent}} = 100\left[\frac{(Sum\ of\ EL\ Growth\ of\ all\ schools\ AZELLA\ FAY\ n-count\ to\ be\ eligible\ for\ points)}{No.\ of\ schools\ that\ have\ the\ necessary\ AZELLA\ FAY\ n-count\ to\ be\ eligible\ for\ points}\right]$$

Up to 5 points are awarded for growth using the following system:

STANDARDIZED	Range	Points
EL Growth is greater than or equal to the EL statewide mean current year percent growth.	TBD	5
EL Growth is 0.01 to 0.50 standard deviations below the EL statewide mean current year percent growth.	TBD	4
EL Growth is 0.51 to 1.00 standard deviations below the EL statewide mean current year percent growth.	TBD	3
EL Growth is 1.01 to 2.00 standard deviations below the EL statewide mean current year percent growth.	TBD	2
EL Growth is 2.01 to 3.00 standard deviations below the EL statewide mean current year percent growth.	TBD	1
If a school's EL Growth is 0%, due to no growth.	TBD	0

Graduation Rate

The graduation (Grad) rate indicator is worth 20% of a 9-12 school's letter grade. Schools must have a minimum of 10 students in the 4-year cohort to be eligible for points. Graduation rate points include two measures each worth 10%: 1) a 4-, 5-, 6-, and 7-year calculation and 2) an improvement calculation. Schools that are only eligible for one portion of the Graduation Rate component can earn points out of 10 for the portion for which they are eligible.

4-, 5-, 6-, and 7-year calculation (10%)

The intent of the multiple year calculation is to hold schools accountable to multiple cohorts. The cohorts are weighted accordingly with the greatest emphasis on the 4-year cohort (see below). These points are capped at 10.

Graduation Rate	Cohort	Weight
4-year	2021	5.0%
5-year	2020	4.0%
6-year	2019	2.5%
7-year	2018	0.5%

The following formula displays the 4, 5, 6, and 7-year graduation rate calculation:

$$\boldsymbol{4,5,6,and\ 7-year\ Grad\ Rate\ Points} = \left(0.05(Cohort\ 2021\ 4\text{–}year\ Grad\ rate)\right) + (0.04(Cohort\ 2020\ 5\text{-}year\ Grad\ rate)) + (0.025(Cohort\ 2019\ 6\text{-}year\ Grad\ rate)) + (0.005(Cohort\ 2018\ 7\text{-}year\ Grad\ rate))$$

Graduation Improvement Calculation (10%)

The intent of the improvement calculation is for schools to increase their 4-year graduation rate compared to prior year or maintain a current year 4-year graduation rate of 90% or higher.

Improvement Rate Points = (Current Year 4-year graduation rate - Prior Year 4-year graduation rate)

Improvement Rate Points (0, 5, or 10 points)

- A school's Cohort 2021 4-year graduation rate is greater than or equal to 90% = 10 points
- The difference between a school's Cohort 2021 4-year graduation rate and Cohort 2020 4-year graduation rate is greater than 2 points = 10 points
- The difference between a school's Cohort 2021 4-year graduation rate and Cohort 2020 4-year graduation rate is greater than or equal to -2 points and less than or equal to 2 points = 5 points
- The difference between a school's Cohort 2021 4-year graduation rate and Cohort 2020 4-year graduation rate is less than -2 points = 0 points

Graduation Rate Points = 4-, 5-, 6-, and 7-year Rate Points (if eligible) + Improvement Rate Points (if eligible)

College and Career Ready

The College and Career Ready Indicator is worth 20% of a 9-12 school's letter grade. College and Career Ready points are self-reported through ADEConnect. Schools must have 10 students in the Cohort of 2022 to be eligible for these points. These students should have been enrolled by October 1 and stayed continuously enrolled until May 2, 2022. Cohort 2022 students who graduated either during Fiscal Year 2022 or a prior fiscal year would also be included. Students that are concurrently enrolled at multiple students should be reported in the CCRI data for the student's diploma issuing school. If monitored school should be able to provide documentation showing correct assignment. Schools can download the student level spreadsheet to assist with the calculations outlined below. Schools should look over each student's entire high school experience to determine how each student performed on the metrics outlined below. Schools will then submit their total points earned to ADE through ADEConnect on the A-F Self-Reporting Data by TBD. This indicator is capped at 23.

Scoring:

- A student who accumulates at least 1 indicator point will generate 10 CCR points
- A student who accumulates at least 2 indicator points will generate 20 CCR points
- A student who accumulates at least 1 indicator point of Red indicators and at least 1 indicator point of Blue indicators will generate 22 CCR points
- Schools that increase their prior year post-secondary and military enrollment percentage or have 85% post-secondary and military enrollment earn one bonus point

Schools that are not eligible for CCRI points must still complete the Self-Report data application and indicate that they are ineligible for points.

COLLEGE AND CAREER READINESS RUBRIC CREDENTIALS – See Appendix for full list

Value	Indicators
1.25 **Blue**	Earns a Grand Canyon Diploma or International Baccalaureate Diploma
1.25 **Red**	Completes a CTE sequence and passes the Arizona Technical Skills Assessment for that sequence
.5 per exam **Blue**	Passing score on AzMerit Algebra 2
.35 per exam **Blue**	Meets cut score on ACT English, math, reading or science exam
.5 per exam **Blue**	Meets cut score on SAT English or math exam
.5 per exam **Blue**	Meets cut score on any AP exam
No points, data collection only	Arizona diploma seals collection, Information to follow
.5 **Red** or **Blue**	Completes the FAFSA
.5 per course **Red**	Passes a college level career pathway (CTE) course for which college credit can be earned with an A, B, or C (i.e. dual enrollment and concurrent enrollment)
.5 per course **Blue**	Passes a college level English, math, science, social studies, or foreign language course for which college credit can be earned with an A, B, or C (i.e. dual enrollment and concurrent enrollment)
.25 per course **Red**	Completes a CTE course with an A, B, or C (outside of completed sequence referenced above) –
.5 **Red**	Meets benchmarks for ASVAB
.5 **Red**	Meets benchmarks for ACT WorkKeys, or met benchmarks for Arizona Career Readiness Credentials
.35 per exam **Blue**	Meets cut score on ACCUPLACER, ALEKS, COMPASS, EdReady (or any nationally recognized college placement exam currently used by an Arizona institution), or Cambridge IGCSE English, reading, writing, math, social studies, science, or foreign language exam
.5 per exam **Blue**	Meets cut score on CLEP, Cambridge A or AS, or IB English, math, social studies, science, or foreign language exam
.5 per credential, certificate, or license **Red**	Earns an Industry-Recognized Credential, Certificate, or License **No more than one point may be awarded in this indicator.**
1 **Red**	Completes well-defined Work-Based Learning (i.e. internship) of at least 120 hours
1 **Blue**	Meets all 16 Arizona Board of Regents program of study requirements – an A, B, or C is earned in the 16 core courses

- A student would receive 0.5 points for each credential/ certificate or license earned
- A student could earn a maximum of 1.0 points in this category

Bonus Points

Schools can earn bonus points four ways. The bonus points are added after the total score is calculated.

College and Career Readiness

Schools that increase their prior year post-secondary and military enrollment percentage or have 85% enrollment earn one bonus point which is calculated and self-reported by the school as part of their CCRI data submission.

Special Education Enrollment

Schools with high populations of FAY students enrolled in special education will earn bonus points. Bonus points were awarded based on the distance from the school's percentage to the statewide average.

The following formulas are used for the calculations:

$$\textbf{\textit{School Level CY FAY SPED Program Enrollment}}\ \% = 100\left[\frac{(No.\ of\ CY\ FAY\ students\ who\ are\ enrolled\ in\ a\ SPED\ program)}{(Total\ CY\ FAY\ enrollment\ )}\right]$$

$$\textbf{\textit{Statewide CY FAY SPED Program Enrollment}}\ \% = 100\left[\frac{(No.\ of\ CY\ FAY\ students\ who\ are\ enrolled\ in\ a\ SPED\ program)}{(Total\ CY\ FAY\ enrollment\ )}\right]$$

FAY Special Education Program Enrollment Bonus Points (0, 1, 1.5, or 2 points)

Points are awarded based on the following:

Bonus Points	Range
2	At or above 80% of the statewide average (TBD)
1.5	At 70% to 79% of the statewide average (TBD)
1	At 60% to 69% of the statewide average (TBD)
0	Below 60% of the statewide average (TBD)

Science Proficiency

Schools that administer the AzSCI test to 95% of their Grade 11 students can earn up to 3 bonus points on science achievement of FAY students. Bonus points were awarded based on the distance from the school's percentage to the statewide average.

The following formula is used for the calculations:

$$\textbf{Science Percent Proficient} = 100\left[\frac{(No.\ of\ CY\ FAY\ students\ that\ are\ P\ or\ HP\ on\ AzSCI\ or\ MSAA{-}Science}{(No.\ of\ FAY\ students\ tested\ on\ AzSCI\ or\ MSAA{-}Science}\right]$$

The following details how points are earned.

Science Proficiency Bonus Points (0, 1.5 or 3 points)

- A school's current year percentage of proficient students is greater than or equal to one standard deviation above the statewide average (TBD) = 3 points
- A school's current year percentage of proficient students is greater than the statewide average (TBD) and less than one standard deviation above the average (TBD) = 1.5 points.

ACT Aspire Bonus Points

Schools can earn up to 3 bonus points on administering ACT Aspire to Grade 9 (Cohort 2025) students.

The following details how points are earned.

ACT Aspire Bonus Points (0, 1.5 or 3 points)

- A school's current year percent tested is greater than or equal to 95% = 3 points
- A school's current year percent tested is greater than or equal to 90% and less than 95% = 1.5 points

Calculating Total Points

Below are a few examples of how that can occur, however, this is not every possible combination.

Schools that meet the N-size for every indicator can earn up to 100 points.

$$\textbf{Letter Grade} = \left[\begin{matrix}\big(0.30(Proficiency)\big) + \big(0.20(Growth)\big) + (0.10(EL\ Proficient\ and\ Growth\ Points)) \\ +(0.20(Graduation\ Points)) + (0.20(College\ and\ Career\ Ready\ Points))\end{matrix}\right] + Bonus\ Points$$

Schools that meet the N-size for every indicator except for EL Proficiency can earn up to 90 points:

$$\textbf{Letter Grade} = 100\left\langle\frac{\left[\begin{matrix}\big(0.30(Proficiency)\big) + \big(0.20(Growth)\big) \\ +(0.20(Graduation\ Points)) + (0.20(College\ and\ Career\ Ready\ Points))\end{matrix}\right]}{90}\right\rangle + Bonus\ Points$$

Schools that meet the N-size for every indicator except for EL Proficiency and College and Career Ready Points can earn up to 70 points:

Letter Grade

$$= 100 \left\langle \frac{\left[\begin{matrix}\left(0.30(Proficiency)\right) + \left(0.20(Growth)\right) \\ +(0.20(Graduation\ Points))\end{matrix}\right]}{70} \right\rangle + Bonus\ Points$$

Schools that meet the N-size for every indicator except for EL Proficiency, College and Career Ready Points, and Graduation Rate can earn up to 50 points:

Letter Grade

$$= 100 \left\langle \frac{\left[\begin{matrix}\left(0.30(Proficiency)\right) + \left(0.20(Growth)\right) \\ +(0.20(Graduation\ Points))\end{matrix}\right]}{70} \right\rangle + Bonus\ Points$$

Schools without enough students to be eligible for 50 points will be not rated in Fiscal Year 2022.

Appendix

List of Acronyms and Abbreviations

Acronym/Abbreviation	Meaning
AASA	Arizona's Academic Standards Assessment
ACT	American College Test
ADM	Annual Daily Membership
AOI	Arizona Online Instruction
AVG	Average
AzEDS	Arizona Education System
AZELLA	Arizona English Language Learner Assessment
AzMerit/AzM2	Arizona's Measurement of Educational to Inform Teaching
AzSCI	Arizona Science Test
CCRI	College and Career Readiness Index
CY	Current Year
EL	English Language
ELA	English Language Arts
EOC	End of Course
FAY	Full Academic Year
FEP	Fluent English Proficient
FY	Fiscal Year
HP	Highly Performing on ACT (a.k.a. Performance Level 4)
MP	Minimally Performing on ACT (a.k.a. Performance Level 1)
MSAA	Multi-State Alternate Assessment
MSAA Science	Multi-State Alternate Assessment Science Test
No.	Number
P	Proficient Performing on ACT (a.k.a. Performance Level 3)
PP	Partially Performing on ACT (a.k.a. Performance Level 2)
PY	Previous Year
RAEL	Recently Arrived English Learner
SG	Subgroup
SPED	Special Education

Fiscal Year 2022 A-F CCRI Credentials for CTE Programs

Credential Name

- Adobe Certified Associate (ACA)
- Amatrol
- American Welding Society Certification (AWS)
- APCO International- Public Safety Telecommunication Dispatcher
- Apple Certified Pro (ACP) - Final Cut Pro
- Approved Veterinary Assistant (AVA)
- Arizona Aesthetician License
- Arizona Agriculture Skills & Competencies Certificate
- Arizona Center for Fire Service Excellence-Fire Fighter I and II
- Arizona Cosmetology License
- Arizona Department of Public Safety- Security Guard Certification
- Arizona Landscape Contractor Association (ALCA)
- ASE Student Certifications-G1, A1-A8, AST
- ASE Student Certifications-Medium/Heavy Diesel (T2-T6)
- ASE/ICar Student Certifications-Paint and Refinishing, Non-Structural Repair, Mechanical and Electrical
- Autodesk AutoCAD Certified User
- Autodesk Certified User - 3ds Max; Maya
- Beginning Jewelry Sales
- Biotechnician Assistant Credential (BACE)
- CAD-CAM
- Certified Cardiographic Tech (CCT)
- Certified Front Desk Representative
- Certified Fundamentals Cook (CFC) and Pastry Cook (CFPC)
- Certified Guest Service Professional (CGSP)
- Certified Healthcare Documentation Specialist Transcriptionist (CHDS)
- Certified Hospitality and Tourism Management Professional
- Certified Internet Web (CIW) - JavaScript Specialist
- Certified Nurse Assistant (CNA)
- Certified Personal Trainer (CPT)
- Certified Pharmacy Technician (CPhT)
- Certified Phlebotomy Technician
- Certified Physical Therapy Aide (CPTA)
- Certified Restaurant Server
- Chief Architect Certified User
- Child Development Associate Credential
- Clinical Medical Assistant (CCMA)
- CompTIA A+
- CompTIA IT Fundamentals
- CompTIA Network+
- CompTIA Security +
- CSX Cybersecurity Fundamentals Certificate
- Emergency Medical Responder (EMR)
- Emergency Medical Technician (EMT)
- FAA Airframe Mechanic
- FAA Ground Instruction; Instrument; Control Tower and Remote Pilot
- FAA Powerplant Mechanic
- FCC License
- Licensed Massage Therapist (LMT)
- Licensed Nurse Assistant (LNA)
- Manufacturing Skill Standards Council (MSSC)
- Master CAM
- Mechatronics
- Microsoft Office Specialist (MOS) credential
- Microsoft Technology Associate (MTA)
- NAFTrack Certification
- National Institute for Metalworking Skills (NIMS)
- National ProStart Certificate of Achievement (COA)
- NCCER Cabinetmaking
- NCCER Carpentry
- NCCER Construction Technologies
- NCCER Core
- NCCER Heavy Equipment Operator
- NCCER HVAC
- NCCER Welding
- Oracle Java certification-fundamentals
- OSHA 10
- Praxis Para Pro Certificate
- PrintED/SkillsUSA Student Certification
- Programmer I -JAVA basics
- QuickBooks Certified User (QBCU)
- Radiation Health and Safety (RHS)(by Dental Assisting National Board)
- Registered Clinical Medical Assistant Specialist (RCMAS)
- Registered Medical Assistant (RMA)
- ServSafe Food Protection Manager
- SolidWorks - Certified Solidworks Associate (CSWA), Certified Solidworks Professional (CSWP)
- Wildland Firefighter