

How are Students Linked and Attributed to Teachers, Principals, and Schools in the State-Provided Growth Models?

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Growth models measure the change in achievement on an assessment between two points in time for an individual student compared to similar students. Individual students who are linked to their teachers, principals, and schools and who meet enrollment duration requirements are attributed to their educators. The process for linking and attributing students differs for teachers, principals, and schools and between the grades 4-8 and 9-12 growth models.

New York State teachers of English language arts (ELA) and mathematics in grades 4-8 and principals receive State-provided growth scores based on 2021-22 State tests **for advisory purposes** only pursuant to Chapter 59 of the Laws of 2022, which amended the Student Performance Category requirements of Education Law §3012-d.

Teacher Linkage

The methodology used to link students to teachers for the Grades 4-8 State-provided growth model for teachers consists of using three existing collections. Beginning in 2021-22, the following data files will be used¹:

- **Course Instructor Assignment (CIA):** The CIA collection links teachers to courses. Teacher entry and exit dates are used to capture the proportion of time a primary instructor taught a course that is tied to a Grades 4-8 ELA or Math State assessment or Algebra 1 Regents examination.
- **Student Class Entry Exit (SCEE):** The SCEE collection links students to courses. Student entry and exit dates per course are used to ascertain when the student was enrolled in a course.
- **Student Attendance:** The Student Attendance collection provides the number of days that students were in attendance from the beginning of the school year to the first day of the Grades 3-8 ELA and Math assessment dates. The number of days in attendance is used to determine the student attendance weight.

Teacher-student linkages are made in three steps:

1. Determine the Course Duration
2. Determine the Enrollment Duration
3. Determine Student Attendance in a Course

¹ The ESSA double-testing waiver allows students in Grades 7-8 to take math (not ELA) Regents exams instead of the grade-level state assessments for institutional accountability purposes. The state-provided growth model uses math Regents Staff Student Course records to identify teachers whose Grade 6-8 students may also take 1 the grade-level state math assessment.

Course Duration

Course duration captures how much possible time a student could spend in a course that is tied to a New York State Testing Program (NYTSP) assessment in ELA or Math State assessment or a math Regents examination, regardless of how many teachers taught that course.

Enrollment Duration

Enrollment duration is the amount of overlap between the student and the teacher. It is intended to capture the length of time a student could have spent with the teacher in a given course based on their enrollment in that course.

The course duration and enrollment duration are used to determine if students are enrolled in their courses for at least 60% of the time. Student growth percentiles (SGPs) for students who meet the 60% enrollment threshold are weighted for their teacher based on the students' attendance in the course.

Attendance Duration

A student's impact on a teacher's result is determined by how often they were simultaneously present in the classroom.

Principals and Schools

Students are linked to their principals and schools based on the grade(s) for which the principal and school are responsible. Elementary and middle schools that serve any combination of grades 4-8 and their principals can be responsible for a single grade and still receive a State-provided growth score.

However, principals and schools with students in grades 9-12 must be responsible for all of grades 9 through 12 to receive State-provided growth results.

For a student to be attributed to a principal or school, the student must meet the continuous enrollment requirements: enrolled in the same school on Basic Education Data System (BEDS) day (i.e., the first Wednesday in October) and the first day of the State assessment administration appropriate for their grade (or age, if ungraded).

Table 1 provides a summary of the linkage and attribution requirements for teachers, principals, and schools in the State-provided growth models. The last two rows detail how students who meet the attribution requirements and who have a student growth percentile (SGP) score are included in their educator's State-provided growth results, so long as their educator has at least 16 SGPs.²

Step 1: Calculate Course Duration

$$\frac{\text{LATEST TEACHER EXIT DATE} - \text{EARLIEST TEACHER ENTRY DATE}}{\text{COURSE DURATION}}$$

Step 2: Calculate Enrollment Duration

$$\frac{\text{TEACHER / STUDENT EXIT DATE} - \text{TEACHER / STUDENT ENTRY DATE FOR A COURSE}}{\text{ENROLLMENT DURATION}}$$

Step 3: Calculate Attendance Duration

$$\frac{\text{DAYS PRESENT}}{\text{DAYS ENROLLED}} = \text{ATTENDANCE DURATION}$$



$$\text{WEIGHT} = \frac{\text{ENROLLMENT DURATION}}{\text{COURSE DURATION}} \times \frac{\text{ATTENDANCE DURATION}}{\text{ENROLLMENT DURATION}}$$

² Students can be attributed to an educator but not have an SGP.

TABLE 1. TEACHER, PRINCIPAL, AND SCHOOL LINKAGE AND ATTRIBUTION REQUIREMENTS

	Grades 4-8 MGP			Grades 9-12 MGP and GRE	
	Teacher	Principal	School	Principal	School
Linked	Student is enrolled in a teacher’s course as identified by the Teacher Student Data Link (TSDL) methodology	Principal is responsible for the same grade level as the assessment taken by a student	-	Principal is responsible for all of grades 9-12	School is responsible for all of grades 9-12
Attributed	Student enrolled for 60% or more of the course duration	Student enrolled in the school on BEDS day and the first day of the State assessment administration	Student enrolled in the school on BEDS day and the first day of the State assessment administration	Student enrolled in the school on BEDS day and the first day of the State assessment administration	Student enrolled in the school on BEDS day and the first day of the State assessment administration
Weight	$\frac{\text{ATTENDANCE DURATION}}{\text{COURSE DURATION}}$	N/A	N/A	N/A	N/A
MGP	$\frac{\sum \text{SGP} \times \text{WEIGHT}}{\sum \text{WEIGHT}}$	$\frac{\sum \text{SGP}}{\text{N OF STUDENTS}}$	$\frac{\sum \text{SGP}}{\text{N OF STUDENTS}}$	$\frac{\sum \text{SGP}}{\text{N OF STUDENTS}}$	$\frac{\sum \text{SGP}}{\text{N OF STUDENTS}}$

Note: Student SGPs will be included in their teacher, principal, or school’s results if the student has the necessary information to generate an SGP and the educator has at least 16 SGPs. 1 The symbol “Σ” indicates the sum of the values.

Details on how the attribution and linkage are used in the computation of the State-provided growth model can be found in the technical report, available on the [NYSED growth measures toolkits](#) page.