

Texas Projection Measure (TPM) Frequently Asked Questions

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*If you have a question that is not answered here, please
send your question to studenta@tea.state.tx.us*

*Resources for the Texas Projection Measure are available at
http://www.tea.state.tx.us/student.assessment/resources/growth_proposal/*

These frequently asked questions (FAQs) are divided into four categories: **General**, **Technical**, **Accountability**, and **Reporting**.

GENERAL

1. What is the Texas Projection Measure (TPM)?

The TPM estimates whether a student is likely to pass TAKS assessments at a future grade (grade 5, 7 [writing only], 8, or 11). This measure is based on (1) the student's current performance on TAKS and (2) the TAKS scores of all students on the campus that the student attends. The TPM will be reported in mathematics, reading, English language arts, science, social studies, and writing.

2. Why is the Texas Projection Measure (TPM) useful to teachers and administrators?

The TPM provides information about

- how individual students and groups of students are likely to perform in the next high-stakes grade after receiving content-area instruction
- how each student's projection compares with performance defined as Met Standard and Commended Performance in the projection grade

3. How is this measure different from many other assessment measures used in Texas?

The TPM differs from many other Texas assessment measures in the following ways:

- It uses scores in more than one subject to make a projection. Most other measures focus only on scores in one subject area. The use of scores in more than one subject area helps make the projections more accurate. As an example, suppose the goal is to predict a student's weight in a future year. The prediction would be made with the student's current weight. However, the prediction would be more accurate if the student's weight in the current year **and** the student's height in the current year were used to make the prediction. Furthermore, the prediction would be even more accurate if the student's weight, the student's height, and the average weight of the student's family members were included. The TPM uses information about student performance in two or more subjects to enhance the projection accuracy.
- It projects from the Spanish version of TAKS to the English version of TAKS. In most other instances, scores for the Spanish-version TAKS and English-version TAKS are not mathematically combined; in other words, the scores from these different language-version tests are not added, subtracted, or averaged. The TPM, however, uses the scores in one language version to project to another language version. The reason this is possible is that the projection is a regression equation and does not require that the scores for the two language versions be mathematically combined. Again, the weight and height example in the preceding bullet helps explain this feature of the TPM. A student's weight will help predict that student's height because the two features of a person are related. The pounds and inches are not mathematically combined, though.

4. Why did Texas develop the Texas Projection Measure (TPM)?

Texas developed the TPM to meet state and federal requirements.

State

Texas legislation requires that the commissioner determine a method for measuring annual improvement in student achievement. The TPM provides a measure of how student performance at the end of a school year positions a student to meet the performance standard in the future projection year (e.g., grade 5, 8, or 11 with the exception of writing, which is projected to grade 7) after receiving grade-level instruction. It also provides another way for schools to meet performance standards as part of state accountability ratings.

Federal

Texas developed the TPM as a way to provide additional flexibility for schools and districts in meeting the Adequate Yearly Progress (AYP) targets that are required by federal law. It provides another way for schools to meet performance standards as part of federal AYP calculations.

5. Why did Texas choose the Texas Projection Measure (TPM)?

Texas chose the TPM because it is a good fit for the current assessment system, will work well with future high school End-of-Course (EOC) assessments, and meets the requirements that the United States Department of Education placed on growth measures used for Adequate Yearly Progress (AYP). The TPM projects student performance in grades 5, 8, and 11, grades that are already part of the current high-stakes structure of the Texas assessment program. This measure balances accuracy and transparency. By using prior-year equations and publishing them in advance of their application, Texas will maintain the use of transparent calculations for high-stakes accountability. This model also builds on many of the features of the regression-based model that the Dallas Independent School District (ISD) has been implementing since 1992 and allows Texas to take advantage of lessons learned by Dallas ISD through long-term implementation of a regression-based projection model using Texas's state-required assessments. The model fits well with the future EOC assessments because projections can be made when courses are taken in different sequences, when the curriculum overlap is substantial (e.g., English I, English II, and English III), and when the curriculum overlap is minimal (e.g., biology, chemistry, and physics). The United States Department of Education requires that growth models used in AYP calculations meet certain requirements. See [Question 37](#) for more information about the requirements that the TPM needed to meet for use in AYP calculations.

6. In what assessments, subjects, and grades will the Texas Projection Measure (TPM) be used in spring 2009?

In spring 2009, the TPM will provide projections for all TAKS English- and Spanish-version tests except grade 8 science, for all TAKS (Accommodated) tests and linguistically accommodated versions of TAKS in reading/English language arts, mathematics, writing, science, and social studies. Table 1 shows the subjects and grades from which projections are made and the grade to which each projection is made.

Projections from grade 8 science to grade 11 science will not be made in 2009, given that the grade 8 science assessment has only been administered since 2006—too recent for projection equations to be developed. The grade 8 to grade 11 science projections will be available for the first time in spring 2010.

Table 1. Projection Subjects and Grades

TAKS Subject	Grades Projected From	Grade Projected To
Reading/English Language Arts	3 and 4	5
	5, 6, and 7	8
	8, 9, and 10	11
Reading (Spanish)	3 and 4	5 (in English and Spanish)
	5 and 6	8 (English)
Mathematics	3 and 4	5
	5, 6, and 7	8
	8, 9, and 10	11
Mathematics (Spanish)	3 and 4	5 (in English and Spanish)
	5 and 6	8 (English)
Writing	4	7
Writing (Spanish)	4	7 (English)
Science	5	8
	10	11
Science (Spanish)	5	8 (English)
Social Studies	8 and 10	11

7. How will the Texas Projection Measure (TPM) be used with assessments given in English and Spanish?

Projections reported on the Confidential Student Report for students taking Spanish versions of TAKS in grades 3 and 4 will be made to the Spanish version of TAKS in grade 5. However, projection equations to both the Spanish and English versions of TAKS grade 5 will be published and made available to the state. The reason for publishing projection equations to both language versions in grade 5 is that some students who take a Spanish version of TAKS in grades 3 and 4 take a Spanish version of TAKS in grade 5, while other students who take a Spanish version of TAKS in grades 3 and 4 may take an English version of TAKS in grade 5. The Language Proficiency Assessment Committee (LPAC) decides which language version test is most appropriate for a student. The criteria the LPAC should use to determine the most appropriate language version of TAKS for a student are listed in the publication titled *LPAC Decision-Making Process for the Texas Assessment Program*. The TPM is not intended to be used in making the decision about which language version is most appropriate for a student.

When the projection is from grade 4 Spanish writing to grade 7 or from grade 5 Spanish to grade 8, the projections are to the English versions of TAKS because TAKS assessments after grade 6 are offered in English only.

8. What changes in the Texas Projection Measure (TPM) are possible for spring 2010?

Texas will likely use the TPM in state and federal accountability systems for the first time in spring 2009. After that first administration, Texas will conduct additional analyses to evaluate model features. If necessary, Texas will adjust the model so that it best meets the state's needs.

9. Where can I find more information about the Texas Projection Measure (TPM)?

Resources related to the TPM are available at http://www.tea.state.tx.us/student.assessment/resources/growth_proposal/. Additional supporting documents will be posted on the TEA Student Assessment website in April prior to the reporting of the TAKS grades 5 and 8 mathematics test results. They will include the following:

- Online Texas Projection Measure Calculator
- Step-by-step procedures for calculating the Texas Projection Measure
- A listing of district and campus subject means
- Procedures for developing the Texas Projection Measure equations

10. Will the Texas Projection Measure (TPM) be reported for TAKS–Modified (TAKS–M)?

Once sufficient data are available for the TAKS–M alternate assessments, Texas will implement projection equations like those used with TAKS/TAKS (Accommodated) assessments. However, to develop the projection equations for this assessment, TAKS–M data for students in both the current and projection grades need to be available. Table 2 summarizes the phase-in for the TAKS–M projection equations.

Table 2. Current and Projection Grades for Applying the TPM to TAKS–M

Current Grade	Projection Grade	Year Data Available on First Cohort	First Year Projections Reported
3	5	2010	2011
4	5	2009	2010
5	8	2011	2012
6	8	2010	2011
7	8	2009	2010
8	11	2011	2012
9	11	2010	2011
10	11	2009	2010
11	N/A	N/A	N/A

11. Will the Texas Projection Measure (TPM) be reported for TAKS–Alternate (TAKS–Alt)?

No, projections will not be made in 2009 for students taking TAKS–Alt. For TAKS–Alt, Texas will implement a transition table approach to growth. This will require that Texas subdivide the three proficiency levels (Did Not Meet Standard, Met Standard, and Commended Performance). Once the proficiency levels are subdivided, Texas will develop a descriptive transition table that describes students' progress relative to their progress expectations. Finally, Texas will set progress targets that require students below proficiency to reach proficiency by the next high-stakes grade.

The growth model for TAKS–Alt will be implemented for the first time in 2010, after Texas determines the academic achievement standards (i.e., cut points indicating the proficiency levels) for all grades and subjects in spring 2009. Since this type of growth model does not require projection equations, this model will be implemented in 2010 for the same grades and subjects the TPM is implemented for TAKS. Table 3 provides an example of a progress target table showing transitions that TAKS–Alt students who did not meet the standard would be required to make in order to meet progress targets each year. Under these progress requirements, students are expected to meet the standard by the next high-stakes grade, or grades 5, 7 (in writing only), 8, and 11.

Table 3. Example Growth Target Table for TAKS–Alt

Number of Years from Current Grade to Projection Grade	Previous Performance Level		Number of Sub-Levels Improvement Needed to Reach Met Standard	Number of Years to Reach Met Standard	Progress Target
	Level	Sublevel			
1 year	Did Not Meet Standard	Low	3	1	Students must increase 3 sub-levels
		Middle	2	1	Students must increase 2 sub-levels
		High	1	1	Students must increase 1 sub-level
2 years	Did Not Meet Standard	Low	3	2	Students must increase 2 sub-levels one year and 1 sub-level the other.
		Middle	2	2	Students must increase 1 sub-level each year.
		High	1	2	Students must increase 1 sub-level either year.
3 years	Did Not Meet Standard	Low	3	3	Students must increase 1 sub-level each year.
		Middle	2	3	Students must increase 1 sub-level in 2 of the three years.
		High	1	3	Students must increase 1 sub-level in one of the three years.

12. What are the plans for using the Texas Projection Measure (TPM) with the End-of-Course (EOC) assessments?

Table 4 illustrates the current timeline for Texas’s implementation of EOC assessments, phase-out of TAKS at high school, and the year in which EOC assessments will be used for graduation requirements for students entering grade 9. Since 2011–2012 will be the last school year for the administration of the TAKS grade 10 assessments, it is possible that Texas will incorporate performance on English II and Algebra I assessments into the reading/English language arts and mathematics Adequate Yearly Progress (AYP) calculations for campuses, districts, the state, and required AYP reporting groups starting in 2012–2013. Decisions about which EOC assessments will be used in AYP will be made at a later date.

Table 4. Texas EOC Assessment Implementation Schedule

EOC Assessment	Spring 2007	Spring 2008	Spring 2009	Spring 2010	Spring 2011	Spring 2012†	Spring 2013
Algebra I	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒
Geometry	Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒
Biology	Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒
Chemistry		Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒
U.S. History		Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒
Physics			Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒
World Geography			Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒	⇒ ⇒ ⇒
English I				Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒
Algebra II				Field Test	Operational	⇒ ⇒ ⇒	⇒ ⇒ ⇒
English II					Field Test	Operational	⇒ ⇒ ⇒
World History					Field Test	Operational	⇒ ⇒ ⇒
English III						Field Test	Operational
Final TAKS Administration*					Grade 9	Grade 10	Grade 11, Exit Level

*TAKS exit level administrations will continue for out-of-school testers.

†Spring 2012 is the first time that EOC assessments will be used for graduation requirements for students in grade 9.

When EOC assessments replace TAKS at the high school level, students in grade 8 as well as those taking the English II and Algebra I EOC assessments will be impacted by the use of the TPM.

For grade 8 students, the TPM currently projects performance to TAKS grade 11 (exit level). In the future, students in grade 8 will be projected to the courses most commonly taken in grade 11—English III and Algebra II. Projections for grade 8 students will likely be made using student scale scores in TAKS grade 8 reading, student scale scores in TAKS grade 8 mathematics, and campus mean scale scores in the TAKS projection subject (reading for English III and mathematics for Algebra II).

For students taking English II and Algebra I, the subjects currently considered as options for use in AYP calculations, projections will also be made to English III and Algebra II. These projections might then be used in AYP calculations in the same way that projections have been proposed to be used with TAKS. Projections to English III will likely be made using scale scores in two subjects at the student level and campus mean scale scores in English II. Once data are available from EOC administrations that count for students' graduation, student-level scale scores used in the projection equations will be determined based on scores that provide the highest level of predictability.

Regarding the planned timeline for implementing projections with EOC assessments, many decisions have yet to be made, so no definitive plans are in place for applying the TPM to EOC assessments. However, given the current schedule, it would be possible to develop equations for

the following four projections for the first time in 2013–2014 and to implement these projections for the first time in 2014–2015:

1. Grade 8 projections to English III
2. Grade 8 projections to Algebra II
3. English II projections to English III
4. Algebra I projections to Algebra II

13. Will the Texas Projection Measure (TPM) be used as part of teacher merit pay systems or in teacher evaluations?

There are no plans at the state level to evaluate the TPM for specific teachers. Any uses of the TPM at the teacher level will be locally determined.

14. If a district already has a growth measure, how will the district use their local measure in addition to the Texas Projection Measure (TPM)?

Districts may decide to use the TPM for local purposes. The availability of the TPM does **not** preclude districts from using other growth measures for local purposes.

TECHNICAL

15. How are projections made?

Projections for each student will be made separately for each subject. The projections are made using students' current year scale scores and prior year campus average scale scores to project a scale score for students in the next high-stakes grade. Table 5 shows what information is used to make the projections in each subject.

Table 5. Predictors Used in the Texas Projection Measure

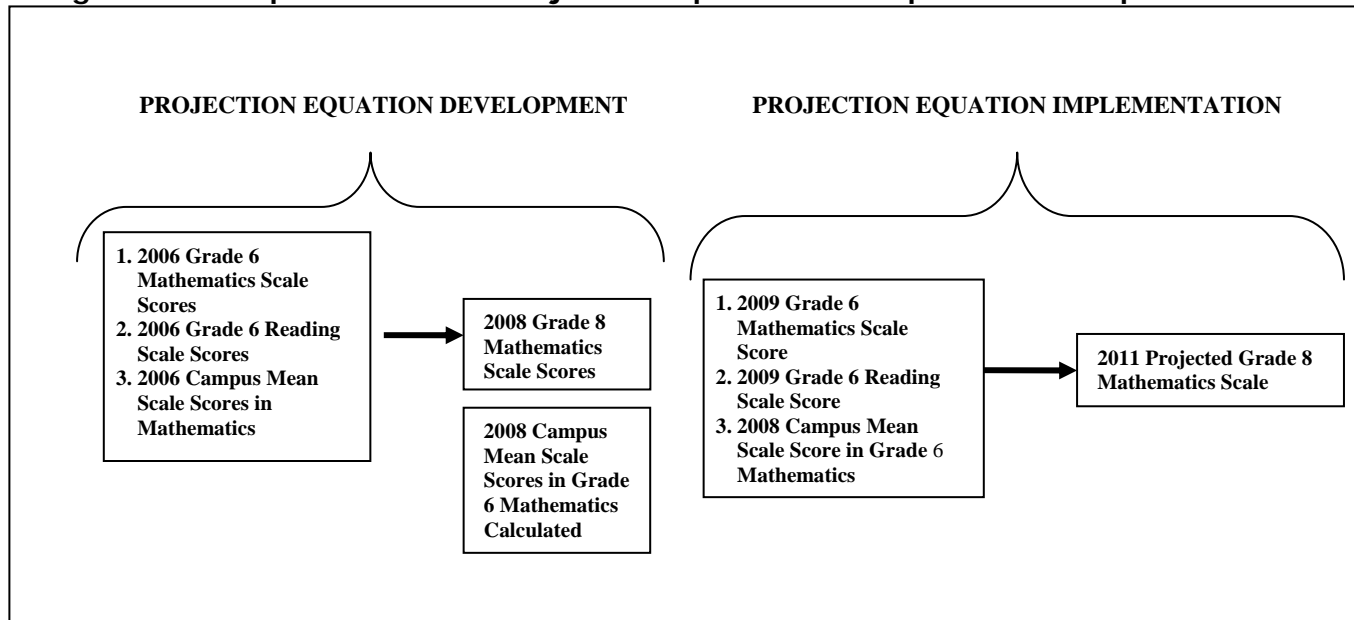
Projection Subject	Predictors Used
Reading	<ol style="list-style-type: none"> 1. Student Reading Scale Score 2. Student Mathematics Scale Score 3. Mean Campus Scale Score in Reading
Mathematics	<ol style="list-style-type: none"> 1. Student Mathematics Scale Score 2. Student Reading Scale Score 3. Mean Campus Scale Score in Mathematics
Writing	<ol style="list-style-type: none"> 1. Student Writing Scale Score 2. Student Reading Scale Score 3. Student Mathematics Scale Score 4. Mean Campus Scale Score in Writing
Science	<ol style="list-style-type: none"> 1. Student Science Scale Score 2. Student Reading Scale Score 3. Student Mathematics Scale Score 4. Mean Campus Scale Score in Science
Social Studies	<ol style="list-style-type: none"> 1. Student Social Studies Scale Score 2. Student Reading Scale Score 3. Student Mathematics Scale Score 4. Mean Campus Scale Score in Social Studies

For each projection, equations are developed using TAKS results for students taking the assessments in prior years. For example, to develop the reading projection equations for

grade 7 students in 2009, 2007 reading results are examined for all students scoring at all scale score values. These results are then compared to the 2008 reading results for these same students. The comparison establishes the relationship of a specific scale score value in 2007 to a specific scale score in 2008. Once projection equations are determined, they are applied the following year.

As an example, the steps used to make 2009 projections from grade 6 mathematics to grade 8 mathematics are illustrated below.

Figure 1. Example Process for Projection Equation Development and Implementation



Steps for developing and applying projection equations from grade 6 to grade 8 mathematics include the following:

1. Projection Equation Development

- a. The following data are used to project grade 8 mathematics from grade 6:
 - i. Students' grade 6 mathematics scale scores
 - ii. Students' grade 6 reading scale scores
 - iii. Students' mean campus mathematics scale score in grade 6
- b. The following data are used to develop the equations:
 - i. Grade 8 mathematics scale scores in 2008
 - ii. Grade 6 mathematics scale scores in 2006
 - iii. Grade 6 reading scale scores in 2006
 - iv. Grade 6 mean campus mathematics scale score in 2006
- c. The grade 8 mathematics scale scores from 2008 are regressed on the other three variables in a multi-level model.
- d. Coefficients from the analyses are recorded and reported.
- e. Campus mean scale scores are calculated using 2008 statewide data for grade 6 mathematics.

2. Projection Equation Implementation

- a. The coefficients from the development of the projection equations are used with the following information to make a student projection in grade 6 mathematics in spring 2009:
 - i. Student's grade 6 mathematics scale score
 - ii. Student's grade 6 reading scale score
 - iii. 2008 campus mean scale score in grade 6 mathematics

- i. A student's 2009 scale score in grade 6 mathematics
 - ii. A student's 2009 scale score in grade 6 reading
 - iii. A student's 2008 mean campus mathematics scale score in grade 6
 - b. Once the projection equation is calculated, a student receives the following information:
 - i. A projection scale score in grade 8 mathematics
 - ii. An indicator about whether the student's projected grade 8 mathematics scale score is at least as high as the grade 8 mathematics scale score that indicates Met Standard

16. To what are projections compared in order to determine if students are projected to meet the standard or not?

When projections are made to a future grade, the result is a projected score. To determine if a student is projected to meet the standard or not in the projected grade, the projected score is compared with the Met Standard cut point in the projected grade and subject. Table 6 shows the Met Standard cut point for projection grades and subjects.

Table 6. Met Standard Cut Point for Projection Grades and Subjects

Projection Grade	Grades From Which Projections are Made	Projection Subject (Language Version)	Met Standard Cut Point
5	3 and 4	Reading	620
5	3 and 4 (Spanish)	Reading (Spanish)	623
5	3 and 4	Mathematics	603
5	3 and 4 (Spanish)	Mathematics (Spanish)	627
7	4	Writing	2100
8	5, 6, and 7	Reading	700
8	5, 6, and 7	Mathematics	700
8	5	Science	2100
11	8, 9, and 10	English Language Arts	2100
11	8, 9, and 10	Mathematics	2100
11	8 and 10	Science	2100
11	8 and 10	Social Studies	2100

As an example, suppose a student taking Spanish TAKS in grade 3 is projected to have a Spanish TAKS score of 630 in grade 5 mathematics. Since the student's projected score of 630 is greater than the Met Standard cut point (627) in Spanish TAKS grade 5 mathematics, that student is projected to meet the standard in Spanish TAKS grade 5 mathematics.

17. Where can I find more detailed information about the projection equations?

For more detailed information about how the projections are made, see Appendix 1 in the TEA proposal to the United States Department of Education (USDE). The proposal can be found on the TEA website (http://www.tea.state.tx.us/student.assessment/resources/growth_proposal/011209_USDE_Growth_Proposal_Texas.pdf). The steps outlined in the proposal were designed for equations that used campus means in both subjects used in the projections. The current equations use only the campus mean in the projection subject. Therefore, the document will be revised and posted with the updated information in spring 2009.

18. Why use only students' current-year scores to make the projections?

The decision to use only current-year reading/English language arts and mathematics scores in the projection equations was made to balance transparency and validity, maintain current reporting timelines, and maximize the number of students that will receive projections. By using current-year scores in the projection equations, Texas is able to publish projection equations before they are applied, making the growth model fully transparent to decision makers. In addition, this methodology allows a student's projection measure to be reported at the same

time Confidential Student Reports are currently delivered to school districts. Further, the pilot growth study conducted by Texas indicated that a projection model using only current-year scores produced similar accuracy values when compared with a projection model using all student scores in all subjects across four years. Finally, by using current-year scores in the projections, the number of students with sufficient information for a projection is greater than if student scores from past years are needed to make that projection.

19. Why use campus means in the projections?

Campus means are included in the projections for two reasons. First, they provide information about the environment in which students learn. Second, these means were found to be statistically significant in the equation development analyses, meaning that they add precision to the projections. However, the coefficients are small for the campus means relative to the coefficients for the student scale scores, indicating that the impact of the campus means on the projections are smaller than the impact of the student scale scores.

20. How are the campus means used in the Texas Projection Measure (TPM) calculated?

Campus means are calculated the year before they are applied. For spring 2009, campus means in the subject are calculated from the statewide student scores of the 2008 primary administrations for students taking English versions of TAKS, including TAKS (Accommodated) and linguistically accommodated versions of TAKS. Data from all students taking English TAKS with a valid score (i.e., a score code of 'S' for TAKS and TAKS (Accommodated) students or a score code of 'L' and LAT indicator of '1' for a LAT student) in the subject area are used in calculating the campus mean. Campus means are calculated only for campuses with at least 30 students who have valid TAKS English scores in that grade and subject. If a campus has less than 30 students with valid scores, the district mean is used. If there are fewer than 30 students with valid scores in the district, the statewide mean is used. If a student tests in a campus in 2009 with a County-District-Campus (CDC) number that was not in the 2008 statewide dataset, the district mean will be used in the projections. If the district did not have at least 30 students with valid scores, the statewide mean will be used.

21. Why are campus means based on students taking English versions of TAKS used in projections for students taking Spanish versions of TAKS?

The purpose behind the use of the campus means in projections is to measure the impact of campus performance on student performance. In order for the measurement of campus performance to be adequately reliable, it was determined that scores from at least 30 students must be used to calculate the campus mean. The majority of campuses across Texas test less than 30 students with the Spanish versions of TAKS. Therefore, campus means based on student scores on the English versions of TAKS, including students taking TAKS (Accommodated) and LAT versions of TAKS, will capture campus performance more reliably than campus means based on student scores on the Spanish versions of TAKS. For future years, TEA will examine the reliability of aggregating multiple years of Spanish language results in order to produce means and equations for this population of students.

22. Why are projection equations and campus means from the prior year used?

The projection equations and campus means from the year before are used so that the Texas Projection Measure equations can be reported on the Confidential Student Report (CSR). State statute requires that certain TAKS assessment results at certain grades be returned to school districts no later than 10 days after the receipt of test materials; therefore, the results reported on the CSR are turned around very quickly. In order to use current year results and campus means in the projection equations, the TPM projections would not be able to be reported on the CSR, and results based on current year information would not be available until later on a separate report.

23. Why are some of the coefficients for the campus mean scale scores negative? How should the part of the equation with the campus mean coefficient be interpreted?

For some grades and subjects, the coefficients that are to be multiplied by the mean campus scale score are negative. The reason relates to the statistical model used to make the projections. The part of the equation with the campus mean is best interpreted as a statistical adjustment for the projection. The part of the equation related to the school mean should not be interpreted independently from the rest of the equation. The different parts of the equation work together to create the projection. It would not be appropriate, for example, to interpret a negative coefficient for the campus mean to indicate that higher performing schools cause lower student performance in the future.

24. How will the Texas Projection Measure (TPM) be calculated when a student takes a retest?

When a student takes a retest, the student's best score from the primary administration or retest administrations will be used in the TPM, as long as the primary test and retest have been administered in the same language version. If the student's scale score on the retest is lower than the student's scale score on the primary administration, the student's scale score on the primary administration will be the score used in the projection equations. Likewise, if the student's scale score on the first retest is higher than the student's scale score on the primary administration, the student's scale score on the first retest will be used in the projection equation. For Adequate Yearly Progress (AYP) calculations, the TPM from the primary or first retest administration will be used. Students who take a second retest will receive new projections, and these projections will use the best score from the primary, first retest, or second retest administrations.

Since scores from more than one subject area are used in the projection equations, whenever a student takes a retest, projections are made again in **all** subjects. Table 7 provides an example of which scores will be used for a student taking a first retest.

Table 7. Retest Scores in the Texas Projection Measure

Student	Primary Administration in Reading (March 3)	Primary Administration Grades 5 & 8 Mathematics (April 6–7)	Primary Administration Mathematics	First Retest Mathematics Grades 5 & 8 (May 19)	Student "Best" Scale Scores Used in Projection Equations	
			First Retest Reading (April 27–29)		Reading	Mathematics
1	Grade 3 TAKS Reading 470*		Grade 3 TAKS Mathematics 507* Grade 3 TAKS Reading Retest 496*		496	507
2	Grade 3 TAKS Reading 470*		Grade 3 TAKS Mathematics 480* Grade 3 TAKS Reading Retest 451*		470	480
3	Grade 5 TAKS Reading 590*	Grade 5 TAKS (Accommodated) Mathematics 588*	Grade 5 TAKS Reading Retest 632*	Grade 5 TAKS (Accommodated) Mathematics Retest 579*	632	588
4	Grade 8 TAKS Reading 664*	Grade 8 LAT Mathematics 725*	Grade 8 TAKS Reading Retest 670*		670	725

*Scores reported on vertical scale.

25. If a student moves to a new campus, which campus mean is used in calculating the Texas Projection Measure (TPM)?

If a student moves to a new campus, the mean for that new campus (calculated from the prior year scores) will be used in all TPM calculations. For example, suppose a student takes the grade 5 March primary reading administration at Campus A. That student will not have a TPM yet, because all TPM calculations require both reading and mathematics scale scores. Then, the student moves to Campus B and takes the primary mathematics administration in early April. That student's TPM for reading **and** mathematics will use the mean scale score from Campus B. As with all mean campus scale scores, the mean scale score from Campus B will be from the prior year, or 2008.

26. Is the Texas Projection Measure (TPM) a growth measure?

The TPM does not evaluate student score changes in past years, so it is more accurately classified as a projection measure, which provides information about how a student will likely perform in the future after receiving grade-level instruction.

The information about student growth over past years will be provided with the vertical scale, which will be reported for the first time in spring 2009 for TAKS English grades 3–8 in reading and mathematics and for TAKS Spanish grades 3–6 in reading and mathematics. TEA has developed a vertical scale for TAKS that will allow comparisons of student scores over years in a way that will offer a measure of actual growth for each student in these grades, languages, and subjects.

27. How does a value-added model differ from the Texas Projection Measure (TPM)?

A value-added model is a model that attributes student growth to a school, district, or other educational entity. Any growth model can be used in a value-added manner. There are many ways in which the TPM can be used to draw value-added inferences from student projections.

28. How are the Texas Projection Measure (TPM) and vertical scale alike? How do they differ?

The vertical scale will provide information about student growth in past years. The TPM provides information about the future only.

The vertical scale will be available for the first time in spring 2009 for TAKS English reading and mathematics in grades 3–8 and for TAKS Spanish reading and mathematics in grades 3–6. The vertical scale is a conversion of a raw score onto a scale that is common to all assessments that measure a similar content domain (e.g., mathematics) across different grades. With the vertical scale, a student's scale score in one grade can be compared to that student's scale score in another grade, making it possible to determine how much the student has grown in that content area. The TPM provides the best estimate of how a student will perform in the future after receiving content-area instruction, given the student's current scores and the prior year's scores of all students on the campus that the student attends.

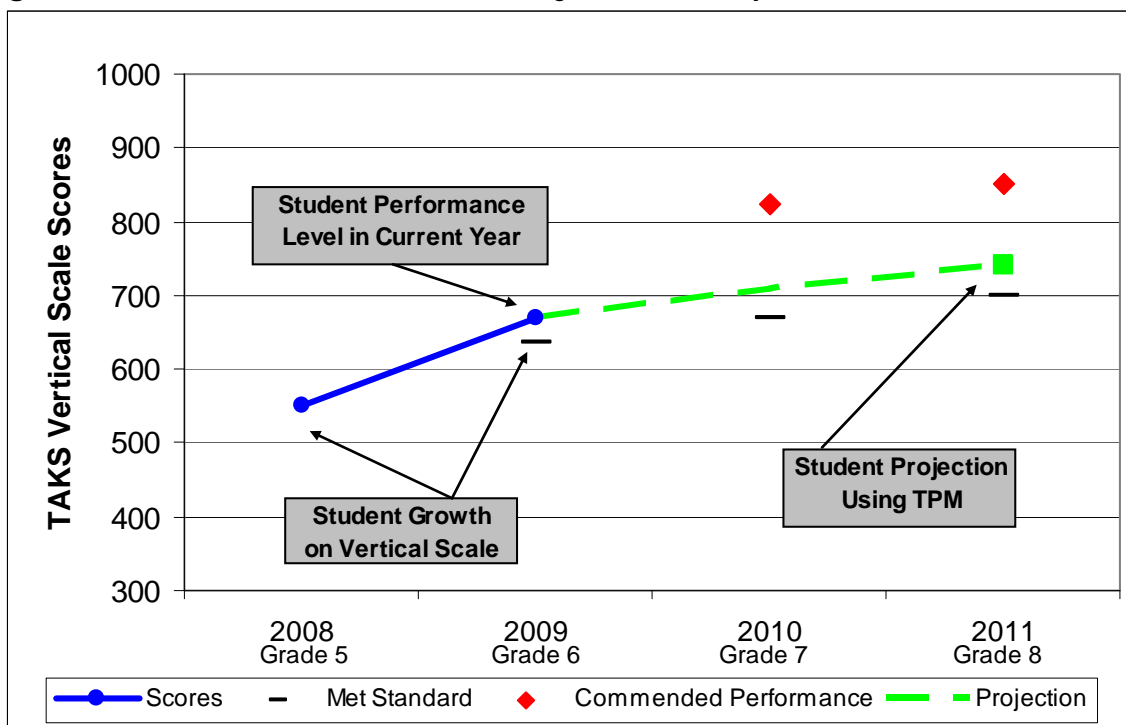
For grades in which a vertical scale is reported, the vertical scale score information can be used with the TPM to provide information about how a student performed relative to the performance standards in the current year, how the student progressed over past years, and how a student is projected to perform in future years after content-area instruction. For grades in which there is not a vertical scale, only current-year and future projection information will be available.

Table 8 illustrates the information that will be available for students testing in a grade and subject with a vertical scale in spring 2009. Figure 2 provides an example of how a student's current score, past scores on the vertical scale, and projections can be used together.

Table 8. Student Information from Vertical Scale and Texas Projection Measure

Timing	Information	Source
Current Year	Student Performance Level	Comparison of Current-Year Scale Score to Performance Level Cut Points (i.e., Did Not Meet Standard, Met Standard, Commended Performance)
Past	Student Growth from Past to Present	Comparison of Vertical Scale Scores from Past to Present Grades in Reading and Mathematics in Grades 3–8
Future	Student Projection (TPM)	Comparison of Predicted Score to Performance Level Cut Points in Projection Grade

Figure 2. Mathematics Growth and Projection Example for Student in Grade 6



29. How accurate are the projections?

Before evaluating the projection accuracy of the Texas Projection Measure (TPM), an analysis was conducted to evaluate the percent of testers who had sufficient data for making a projection with the TPM. Results using 2008 statewide data indicated that 98.0% of all students testing

in reading/English language arts and 97.4% of students testing in mathematics had sufficient data in 2008 for making a projection. See Table 2 in the final proposal to USDE showing the match rates for making student projections (http://www.tea.state.tx.us/student.assessment/resources/growth_proposal/011209_USDE_Growth_Proposal_Texas.pdf).

Projection accuracy overall and for students in AYP reporting groups was provided in Appendix 3 of the January 12, 2008, final proposal to USDE (http://www.tea.state.tx.us/student.assessment/resources/growth_proposal/011209_USDE_Growth_Proposal_Texas.pdf). Reading results indicated that the percent of students who were accurately projected to a reading performance level exceeded 90% for students overall and for all groups except limited English proficient (LEP) students and students in special education (SPED). This high level of projection accuracy was found when projections were made over one, two, and three years. Mathematics results indicated that the percent of students who were accurately projected to a mathematics

performance level were slightly lower than in reading but still high. The percent of accurate projections typically exceeded 80% for students overall and for all groups except the LEP and SPED. Similar levels of projection accuracy were found when projections were made over one, two, and three years.

For the LEP group, students more often underperformed in reading assessments and overperformed in mathematics assessments relative to their projections. Further, projection accuracy was higher when the number of years for the projection was lower. For the SPED group, students tended to perform better than their projections in both subjects. Similar to the LEP group, projection accuracy for the SPED group was higher when the number of years for the projection was lower.

Texas will conduct annual evaluations of the projection accuracy of the TPM, which will include this type of analysis. This annual evaluation will allow Texas to monitor projection accuracy for all students, for student groups, for different subjects, and for different numbers of projection years.

30. Why are the projections more accurate for reading than for mathematics?

There are a number of reasons why projection accuracy is higher for reading than for mathematics, such as the greater similarity of content across years in reading versus mathematics. However, the most noteworthy reason for the higher projection accuracy in reading is that more students in mathematics score around the cut point for Met Standard. These are the students for whom projection accuracy is lowest, since one or two questions can make a significant difference in whether students meet or do not meet the passing standard. Although the projection accuracy for mathematics results is slightly lower than for reading, the percent of accurate projections in mathematics typically exceeded 80% for students overall and for all groups except LEP and SPED.

ACCOUNTABILITY

31. How will the Texas Projection Measure (TPM) be used in state accountability calculations in spring 2009?

Spring 2009 will be the first time Texas will report the TPM. State accountability advisory groups are considering using results of the TPM in the state accountability system beginning as early as 2009. Options under consideration add TPM **only in ways that can benefit districts**. Should the TPM be used to determine 2009 state accountability ratings, no district's rating would be lowered as a result of applying the TPM.

32. How will the Texas Projection Measure (TPM) be used in Adequate Yearly Progress (AYP) calculations in spring 2009?

For federal accountability, Texas has received approval with conditions to use the TPM in the 2009 AYP calculations for students taking reading/English language arts and mathematics assessments in grades 3–8 and 10. Students who Met Standard in 2009 or are projected to meet the standard at the next high-stakes grade will be included in district and campus performance rates for evaluating 2009 AYP results. Texas determines AYP for all districts and campuses and for all students and each student group (African American, Hispanic, white, economically disadvantaged, special education, and limited English proficient) meeting minimum size requirements. There must be 50 students in the grades tested (summed across grades 3–8 and 10) to meet minimum size requirements at the student-group level; in addition, the student group must comprise at least 10% of all test takers in the subject area, or 200 students (even if that does not comprise 10% of all test takers). There are no minimum size requirements for the "All Students" group. Steps in determining AYP are listed below. The change to the process introduced by adding the projection measure is in boldface. Note that for a student without a projection, the student's scale score in the current year is used to

determine that student’s status for AYP. For a school or district to make AYP, all students and each student group that meets minimum size criteria must

- meet or exceed the AYP targets (shown in Table 9) on the assessment measure, **where the percent compared with the AYP target is the percent proficient or projected to be proficient with the Texas Projection Measure**, or meet or exceed the performance gains provisions under safe harbor, and
- have at least a 95% participation rate in the state assessments, and
- meet the state requirements for performance or performance gains on one other academic indicator (graduation rate or attendance rate).

33. Will the Texas Projection Measure (TPM) change the calculation of Adequate Yearly Progress (AYP)?

For most districts, the calculation of AYP will remain as it has in past years, with the exception of the addition of TPM results as described above. However, for districts and campuses with fewer than 50 students tested in grades 3–8 and 10 for either reading/English language arts or mathematics, or no students in the grades tested, one or a combination of the following methods will be used for AYP calculations. The addition of the TPM changes these methods in three ways. First, the percent of students compared with the AYP targets is the percent proficient plus the percent projected to be proficient with the TPM. Second, Texas will no longer incorporate confidence intervals in the evaluation of small districts and campuses. Third, Texas will discontinue the use of uniform averaging in the AYP performance measure calculations for small districts and campuses. Texas will continue to apply other methods that have been used to calculate AYP for districts and campuses with few or no students in the grades tested, as listed below:

- The pairing relationships established for the state accountability system for campuses with no students in grades tested will be used. Results at the “All Students” level will be applied to the paired campuses.
- Campuses that do not have such a pairing relationship will have their district’s performance applied to the campus.
- Very small districts and campuses that do not meet AYP will be reviewed on a case-by-case basis.

34. What are the Texas Adequate Yearly Progress (AYP) Performance Targets for future years?

The performance targets for AYP in Texas are shown in Table 9.

Table 9. Texas’s Adequate Yearly Progress Targets

	AYP Targets								
	2002–03 2003–04	2004–05 2005–06	2006–07 2007–08	2008–09	2009–10	2010–11	2011–12	2012–13	2013–14
Reading/English Language Arts	47%	53%	60%	67%	73%	80%	87%	93%	100%
Mathematics	33%	42%	50%	58%	67%	75%	83%	92%	100%

35. How will the Texas Projection Measure (TPM) be used in Adequate Yearly Progress (AYP) calculations in spring 2009 when students retest?

Students who retest will have projections for AYP based on the best score from either the primary administration or from the first retest opportunity.

36. What impact might the Texas Projection Measure (TPM) have on 2009 Adequate Yearly Progress (AYP) calculations?

Texas conducted a study to estimate the impact of including a projection measure in AYP calculations. The estimates involved using the reading/English language arts and mathematics projections for all students taking English and Spanish versions of TAKS, TAKS (Accommodated), or a linguistically accommodated version of TAKS in 2008 and recalculating 2008 AYP. At the time the study was conducted, confidence intervals and uniform averaging had not been removed from the AYP calculation process, so results of this study do not account for changes in the use of confidence intervals and uniform averaging, as described in [Question 33](#). According to the preliminary 2008 results, without including the proposed projection measure, 66% of districts and 75% of campuses met AYP in 2008. When the projection measure was added to the AYP calculations, 77% of districts and 80% of campuses would have met AYP. The impact of adding the projection equation in 2008 was that 136 additional districts (11%) and 411 additional campuses (5%) would have met 2008 AYP due to the projection measure. When the 2009 AYP targets were applied to the 2008 AYP calculations with projections included, 68% of districts and 77% of campuses would be expected to meet AYP. For more information on these results, see data presented on pages 26–29 of the proposal submitted to USDE (http://www.tea.state.tx.us/student.assessment/resources/growth_proposal/011209_USDE_Growth_Proposal_Texas.pdf).

37. What limits did the United States Department of Education (USDE) place on growth measures used for Adequate Yearly Progress (AYP)?

For states to be approved to use a growth or projection measure in AYP calculations, USDE required that states

- ensure that all students are proficient by 2014 and set annual goals to ensure that the achievement gap is closing for all groups of students identified in the statute;
- set expectations for annual achievement based on meeting grade-level proficiency rather than on student demographic characteristics or school characteristics;
- hold schools accountable for student achievement in reading/English language arts and mathematics separately;
- ensure that all students in tested grades are included in the assessment and accountability system, holding schools and districts accountable for the performance of each student subgroup in all schools and districts;
- include assessments that produce comparable results from grade to grade and year to year in grades 3–8 and high school in both reading/English language arts and mathematics, that have been operational for more than one year, and that have received *Full Approval* or *Full Approval with Recommendations* before the state determines AYP based on 2008–09 assessment results;
- track student progress as part of the state data system; and
- include student participation rates and student achievement on a separate academic indicator in the state accountability system.

Furthermore, USDE also provided additional guidance on growth or projection measures, including that states

- should incorporate available years of existing achievement data instead of relying on only two years of data;
- should consider the impact on student growth trajectories of varying school configurations and of student movement between schools and districts;
- should make growth projections for all students, not just those below proficient;
- should hold schools accountable for the same subgroups as they did under the status model;

- should ensure that all students are included in its growth model proposal to the extent possible, particularly students with disabilities who take an alternate assessment based on alternate academic achievement standards or an alternate assessment based on modified academic achievement standards;
- should **not** use wide confidence intervals (USDE has not approved the use of confidence intervals in any pilot proposal);
- should **not** reset growth targets each year;
- should **not** average scores between proficient and non-proficient students;
- should **not** implement a growth model in addition to an index system; and
- should **not** dilute accountability by adding growth to the accountability system.

In developing the TPM, Texas took these requirements and guidance into consideration. USDE determined on January 8, 2009, that Texas adequately met the requirements and was approved to use the TPM in 2009 AYP calculations conditional on the state assessments receiving *Full Approval* or *Full Approval with Recommendations* in the Standards and Assessment Peer Review process. The Standards and Assessment Peer Review process is a process used by USDE to approve all assessments a state uses in AYP.

38. What are the expectations for student performance by 2013–2014 for Adequate Yearly Progress (AYP) under the Texas Projection Measure (TPM)?

Under the TPM, all students are expected to be proficient by 2013–2014 or to be projected to become proficient within no more than three years after 2013–2014.

REPORTING

39. What information will be reported about the Texas Projection Measure (TPM) in spring 2009?

In spring 2009 the TPM will be reported in several places. Table 10 provides details about the TPM information that will be reported.

Table 10. Spring 2009 Reporting for the Texas Projection Measure (TPM)

Report	Texas Projection Measure Information	Notes
Confidential Student Report (CSR)	<p>TPM information will be reported on the CSR for administrations in which reading and mathematics scores are available. Specifically, TPM information will be reported for April grades 5 & 8 mathematics, April grades 3–10 all subjects, May grades 5 & 8 mathematics, and June/July grades 3, 5, & 8 reading and mathematics.</p> <p>If a student's projected score is at or above the passing standard in the projection grade and subject, then the student is projected as currently on track to pass the TAKS test in the projection grade and subject. For a student projected to pass the TAKS test, the label used on the student's CSR will be "Texas Projection Measure—Projected to Meet Standard at Grade XX: YES." XX in this example represents the projection grade. If the projected score is below the passing standard, then the student is projected as not currently on track to pass the TAKS test in the projection grade and subject. For a student projected to score below the passing standard on the TAKS test, the label used on the student's CSR will be "Texas Projection Measure—Projected to Meet Standard at Grade XX: NO."</p> <p>The TPM label on the CSRs will be available for all subjects assessed in grades 3–10 with the exception of grade 7 writing. TPM information for grade 8 science will be available in 2010.</p>	<p>Since TPM calculations require the use of reading and mathematics scale scores, TPM information is reported for all administrations in which reading and mathematics scores are available. For subjects other than reading and mathematics, the TPM will be reported for students with a valid score in reading, mathematics, and in the projection subject (e.g., science) when the results for that other subject are reported.</p> <p>The score to which the projection value will be compared to determine whether that student Met Standard in the projection grade will be 2100 for all grades and subjects for which there is not a vertical scale. For grades 3–8 English-version reading and mathematics tests and grades 3–6 Spanish-version tests, a vertical scale will be reported starting in 2009. When projections are made to grades 5 (English or Spanish) or 8 in reading and mathematics, the score indicating Met Standard will be the vertical scale score for Met Standard in those projection grades (e.g., 603 for English TAKS grade 5 mathematics and 700 for TAKS grade 8 mathematics). See Table 6 for more information about the passing scores in projection grades.</p>
Parent Brochure	Descriptive information about the TPM will be provided to parents.	
TPM Brochure	A one-page TPM brochure will be created and distributed during the four administrations in which projections will be reported. The TPM brochure will be a blackline master that districts can copy and distribute with the CSRs and parent brochures.	This brochure will provide information such as what the TPM is, why it is being reported, and how the projections are calculated.

Data Files	The TPM results will be added to the data files. Specifically, the TPM indicator will be included (1 = Yes; 0 = No). The 1, or Yes, indicates that students are projected to be at or above the passing standard in the projection grade and subject. In addition, the data files will include the TPM score, or the scale score the student is projected to have in the projection grade.	The spring 2009 TAKS Data File Format with Student Item Analyses including TPM information is posted online at http://www.tea.state.tx.us/index3.aspx?id=3306&menu_id3=793 .
Online Reporting of Texas Projection Measure	More detailed information about the TPM will be reported in fall 2009. The online reports will present projection information at the student level as well as summary reports at the campus, district, region, and statewide level.	<p>These online reports are still in the process of being developed, but they will likely include a student's 2008 score (vertical scale for grades 3–8 reading and mathematics), a student's 2009 results (vertical scale for grades 3–8 reading and mathematics), and a student's projection to the next projection grade (grade 5, 8, or 11). The exception is grade 4 writing, where the projection grade will be grade 7.</p> <p>For grades/subjects other than 3–8 reading and mathematics, 2008 results will not be presented.</p> <p>Results for students in grades 3–8 reading and mathematics will likely include a graph depicting students' "growth" on the vertical scale and their projection. See Question 28 for an example of this type of graph.</p> <p>Summary reports are not yet defined but will likely include the number/percent that met standard and the number/percent that are projected to meet the standard in the projection grade.</p> <p>Location of the online reports and other details about the online reports will be provided later in 2009.</p>

40. Which scale scores will be used to report the Texas Projection Measure (TPM)?

The TPM values will be the scale scores currently reported in the projection grades. For projections to reading and mathematics in grades 5 (English and Spanish) and 8, the projections will be reported using the vertical scale scores. For projections to other grades and subjects, the projections will be reported using the horizontal scale in which 2100 indicates Met Standard. Table 11 provides some examples.

Table 11. Projection Scale Score Examples

Grade Projected From	Grade and Subject Projected To	Projection Scale Scores	Passing Score in Projection Grade
			Met Standard
3 English	5 Reading in English	Vertical Scale Range Approximately 0–1000	620
3 English	5 Mathematics in English	Vertical Scale Range Approximately 0–1000	603
3 Spanish	5 Mathematics in Spanish	Vertical Scale Range Approximately 0–1000	627
4 English	7 Writing	Horizontal Scale Range Approximately 1200–3500	2100
5 English	8 Science	Horizontal Scale Range Approximately 1200–3500	2100
5 Spanish	8 Science in English	Horizontal Scale Range Approximately 1200–3500	2100
6 English	8 Reading	Vertical Scale Range Approximately 0–1000	700
7	8 Mathematics	Vertical Scale Range Approximately 0–1000	700
8	11 (Exit Level) English Language Arts	Horizontal Scale Range Approximately 1200–3500	2100
8	11 (Exit Level) Social Studies	Horizontal Scale Range Approximately 1200–3500	2100
10	11 (Exit Level) Science	Horizontal Scale Range Approximately 1200–3500	2100
10	11 (Exit Level) Mathematics	Horizontal Scale Range Approximately 1200–3500	2100

41. When will the Texas Projection Measure (TPM) be reported on the Confidential Student Reports?

To make a projection with the TPM in reading/English language arts or mathematics, a student needs scale scores in both of these subjects. To make a projection in another subject, a student needs scale scores in reading/English language arts, mathematics, and in the projection subject (e.g., science). Since students take subject-area tests at different times, the TPM is reported only when students have scores in all subject areas needed to make the projection. In addition, since students take retests at different times, the TPM is reported again for all subjects when retest information is available. Once a student takes a retest, all TPM projections are recalculated for that student since both the reading and mathematics scale scores are used in all projections. For example, if a student retests in reading in grade 5 and scores higher on the reading retest than on the primary administration of grade 5 reading, the retest score (the best score) will be used in reading, mathematics, and science projections. Table 12 summarizes the five test administrations in spring 2009, the reporting dates for the subject scores, whether or not the TPM will be reported with the scores, the TPM reporting dates and the scores that will be used in the TPM.

Table 12. Spring 2009 Administrations and Reporting Dates

Admin.	Subject	Grades*	Type	Score Reporting Date	TPM Reported	TPM Reporting Date	Scores Used in TPM
March	Reading	3	Primary	3/20/2009	Yes†	5/22/2009	Reading primary, mathematics
March	Reading	5, 8	Primary	3/20/2009	Yes†	4/24/2009	Reading primary, mathematics primary
March	Writing/Reading/ELA	4, 9, 10	Primary	5/22/2009	Yes	5/22/2009	Reading/ELA, mathematics, writing
Early April	Math	5, 8	Primary	4/24/2009	Yes	4/24/2009	Reading primary, mathematics primary
Late April	Math	3, 4, 6, 7, 9, 10	Primary	5/22/2009	Yes	5/22/2009	Reading primary, mathematics
Late April	Reading	4, 6, 7	Primary	5/22/2009	Yes	5/22/2009	Reading, mathematics
Late April	Reading	3, 5, 8	Retest	5/22/2009	Yes	5/22/2009	Best score reading primary or retest, mathematics primary
Late April	Science	5, 10	Primary	5/22/2009	Yes	5/22/2009	Best score reading/ELA primary or retest, mathematics primary, science
Late April	Social Studies	8, 10	Primary	5/22/2009	Yes	5/22/2009	Best score reading/ELA primary or retest, mathematics primary, social studies
May	Math	5, 8	Retest	6/8/2009	Yes	6/8/2009	Best score for reading and mathematics from primary or retest administrations
June	Math	5, 8	Retest	7/17/2009	Yes	7/17/2009	Best score for reading and mathematics from primary or retest administrations
July	Reading	3, 5, 8	Retest	7/17/2009	Yes	7/17/2009	Best score for reading and mathematics from primary or retest administrations

*TPM is not reported for exit level.

†All students will receive TPM information on their CSR on the reporting date. Students who do not meet the standard on the March administration will receive an updated TPM as part of their April retest report.

42. In what situations will students not have a projection reported?

The Texas Projection Measure (TPM) requires that a student (1) have a valid scale score in the current-year predictor subjects, (2) have a current-year scale score in the projection subject, and (3) have a valid scale score in the same language (English or Spanish) for all scores used as predictors to receive a projection. Examples of students who will **not** receive a projection include students who

- take TAKS in two language versions, such as taking TAKS reading in Spanish and TAKS mathematics in English
- do not take all tests that are needed for a projection
- take TAKS for one subject and TAKS–M for another subject