

LOOK-UP TABLE EXPLANATION – 2006

A group may meet the AYP performance expectation in a content area in one of three ways; by meeting or exceeding expected performance levels (percent of students scoring Basic or above), by being reasonably close, or by meeting the 10% Rule for improvement (commonly called Safe Harbor). This document describes the second method commonly called confidence intervals and the enclosed Look-Up Tables.

Performance varies from year to year for many reasons. These reasons include changes in curriculum, changes in teaching techniques, implementation of new programs, changes in teaching or administrative staff, or changes in class size. School communities have some control over several of these factors yet other factors are beyond the control of schools. One such factor is the variation in the makeup of the cohorts from year to year. The variation is smaller for larger groups and larger for smaller groups. The confidence interval approach is designed to partially ameliorate the effect of cohort variation in the AYP decisions. In effect, when a group is identified as not meeting a performance level, we will be confident that the identification was not based on normal variation from the required performance level.

Confidence, as used here, is a statistical term. While it is possible that no student in a group meets performance expectations in a given year due solely to chance, it is not likely. It becomes less likely as the size of the group increases. The US Department of Education has given New Hampshire permission to apply a confidence level of 99%. No group will be identified for low performance unless the performance is so low that there is less than a 1% chance that it is a normal variation from the required performance level.

Using the Look-Up Table

If the actual performance of a group meets the required performance level, the group satisfies the performance requirement. If the actual performance of the groups falls below the required performance level, the performance of the group is examined to determine if it falls within the confidence interval.

The minimum requirement for each high school content area depends on two factors – the required performance level in the high school content area and the size of the group. The actual calculation appears at the end of this document.

The minimum number of students in a group needed to meet confidence interval requirements is found by scanning down the left-hand column to find the appropriate group size and then across the table to the appropriate column. Remember, the size of the group is the number of students in the group that have been continuously enrolled in the school since October 1 of the school year and have been counted as participating in the assessment.

Example Suppose a high school has 15 students in one group that meet the criteria listed above. The minimum number of students needed to satisfy the confidence interval requirement in Reading is found by scanning down the left-hand column to find 15, and across the table to the Reading column which yields a requirement of 7 students. The required performance level for

Reading is 77% Basic or above. If eleven or more students in this group of 15 students scored Basic or above, the group would meet the required performance level. If the number of students who scored Basic or above is greater than or equal to seven and less than eleven, then the group would be within the confidence interval. If fewer than seven students scored Basic or above, the group would not satisfy the performance requirement in Reading.

<i>New Hampshire 2006 AYP Performance Look-Up Table</i>		
Number Continuously Enrolled	High School	
	Reading	Mathematics
	Number Basic or Above	Number Basic or Above
11	5	3
12	6	4
13	6	4
14	7	5
15	7	5
16	8	6
17	9	6
18	9	7
19		
...		

The Binomial Calculation

This calculation is based on the binomial distribution. Each calculation depends on two variables: a particular performance level, p , and a group size, n . The minimum number of students, M , is defined as:

$$M = \min \left\{ m : \sum_{i=0}^m nCi(p)^i (1-p)^{n-i} \geq .01 \right\}$$