



# Assessment Brief

Public Schools of North Carolina

State Board of Education • Phillip J. Kirk, Jr., Chairman

North Carolina Department of Public Instruction • Michael E. Ward, Superintendent

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## Understanding End-of-Grade Testing: Achievement Levels

The North Carolina *Standard Course of Study* outlines the content standards by describing the knowledge and skills in the various subject areas. When the end-of-grade tests were initially developed, educators in North Carolina felt that performance standards which identify levels of competency expected in each subject area should also be developed. Performance standards, called achievement levels, are one way that scores on the North Carolina End-of-Grade Tests are reported. Unlike percentiles, which yield only relative comparisons, the achievement levels give common meaning throughout the state as to what is expected at various levels of competence in each subject area. These categories are used to better describe the scores on the tests and are based on external evidence about the relative performance of students.

The achievement levels or performance standards for the North Carolina End-of-Grade Tests were set using the contrasting groups method of standard setting. This method involves having students categorized into the various achievement levels by expert judges (North Carolina teachers) who are knowledgeable of the students' achievement assessed in the various domains outside of the testing situation. Teachers are able to make informed judgments about students' achievement because they have observed the breadth and depth of the work each student has accomplished during the school year.

During the initial end-of-grade field testing (May 1992), teachers were asked to categorize each of their students on the basis of "absolute" achievement (comparison to an external standard). Each student was categorized into one of the following four achievement levels based on the teacher's experiences with the student throughout the school year. Teachers were also given the option of categorizing the student as "Not a clear example of any of these achievement levels" if the student was not a clear exemplar of any of the four achievement levels.

Level I Students performing at this level do not have sufficient mastery of knowledge and skills in this subject area to be successful at the next grade level.

Level II Students performing at this level demonstrate inconsistent mastery of knowledge and skills that are fundamental in this subject area and that are minimally sufficient to be successful at the next grade level.

Level III Students performing at this level consistently demonstrate mastery of grade level subject matter and skills and are well prepared for the next grade level.

Level IV Students performing at this level consistently perform in a superior manner clearly beyond that required to be proficient at grade level work.

In all, the judgments of more than 5,000 teachers about the performance of more than 160,000 students were involved in the standard setting process statewide. More than 95% of the students field tested were categorized into one of the four achievement levels, with the remainder categorized as not a clear example of any of the achievement levels. The percentage of students in each achievement level were remarkably similar across subjects and grades. The percentages are presented in Table 1 (see the back of this publication).

The percentages of students shown in Table 1 for each subject and grade were used in conjunction with the frequency distributions of scores from the first administration of the North Carolina End-of-Grade Tests of Reading Comprehension and Mathematics administered in May 1993 to determine where the cut points should be for the achievement levels.

Table 2 gives the range of scores associated with each

achievement level. The grade 3 pretest (PT3) was first administered in September 1996. Table 2 also includes the range of scores for the high school comprehensive test (10) which is administered at grade 10. The high school comprehensive test was developed to measure growth in student achievement in reading and mathematics from grade 8 to grade 10 for the purpose of high school accountability.

Table 1. Percent of students assigned to each achievement level by teachers.

Subject/Grade		Level I	Level II	Level III	Level IV
<b>EOG Reading</b>	<b>3</b>	14.3%	26.9%	37.8%	21.1%
	<b>4</b>	12.5%	28.5%	39.6%	19.5%
	<b>5</b>	10.7%	28.3%	40.1%	20.9%
	<b>6</b>	11.1%	27.7%	41.2%	19.9%
	<b>7</b>	11.1%	28.7%	38.3%	21.9%
	<b>8</b>	9.0%	26.2%	41.2%	23.6%
<b>HSCT Reading</b>	<b>10</b>	13.3%	33.5%	39.6%	13.6%
<b>EOG Mathematics</b>	<b>3</b>	12.0%	28.1%	40.6%	19.2%
	<b>4</b>	10.3%	27.2%	42.8%	19.6%
	<b>5</b>	13.0%	27.8%	40.8%	18.3%
	<b>6</b>	12.1%	28.1%	40.4%	19.4%
	<b>7</b>	12.4%	27.9%	39.8%	19.9%
	<b>8</b>	11.2%	28.8%	40.4%	19.6%
<b>HSCT Mathematics</b>	<b>10</b>	15.9%	31.1%	38.1%	15.0%

Table 2. Range of scores associated with each achievement level for score reporting (1998).

Subject/Grade		Level I	Level II	Level III	Level IV
<b>EOG Reading</b>	<b>PT3</b>	119-127	128-132	133-144	145-162
	<b>3</b>	114-130	131-140	141-150	151-172
	<b>4</b>	118-134	135-144	145-155	156-179
	<b>5</b>	124-138	139-148	149-158	159-182
	<b>6</b>	124-140	141-151	152-161	162-183
	<b>7</b>	126-144	145-154	155-163	164-183
	<b>8</b>	132-144	145-155	156-165	166-187
	<b>HSCT Reading</b>	<b>10</b>	132-150	151-162	163-174
<b>EOG Mathematics</b>	<b>PT 3</b>	105-117	118-125	126-134	135-154
	<b>3</b>	98-124	125-137	138-149	150-173
	<b>4</b>	111-131	132-142	143-155	156-182
	<b>5</b>	117-140	141-149	150-160	161-188
	<b>6</b>	130-145	146-154	155-167	168-196
	<b>7</b>	134-151	152-160	161-172	173-203
	<b>8</b>	137-154	155-164	165-177	178-208
	<b>HSCT Mathematics</b>	<b>10</b>	141-159	160-171	172-188