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## ABSTRACT

The document presents the results of state mandated assessment in the primary grades in the Wake County Public Schools, North Carolina. The North Carolina State Board of Education has mandated that school districts implement assessments at kindergarten, first, and second grades using state-developed materials, adaptations of those materials, or unique assessments adopted by local school boards. The assessments will be required in all school districts during the 2000-2001 school year, but the Wake County Public Schools had chosen to adapt state assessment material as early as 1995. More kindergarten students in 2000 (37%) than in 1999 were beyond the early-emergent/emergent reading stage by the end of the year, but almost one quarter of both kindergarten and first grade students and one-third of second graders were identified as in need of extra reading support at the next grade level. Fewer students were identified as needing extra support in writing. Slightly fewer kindergarten students in 2000 (11%) than in 1999 remained at the pre-emergent stage of mathematics development and were identified as needing extra support in the next school year, but the percentage of students in grades 1 through 5 demonstrating proficiency in none of the mathematics strands or in only one of the four strands ranged from 13% at first grade to 22% at grades 3-5. Four attachments contain details about testing results. (SLD)

# MEASURING UP

January, 2001

E&R Report No. 01.05

## 1999-2000 WCPSS Grades K-5 Literacy and Mathematics Assessment Results

Carol Speas

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Wake County Public Schools

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# MEASURING UP

WAKE COUNTY PUBLIC SCHOOLS

EVALUATION AND RESEARCH DEPARTMENT

## 1999-2000 WCPSS Grades K-5 Literacy and Mathematics Assessment Results

January 2001

*Author: Carol Speas*

### Executive Summary

More kindergarten students in 2000 (37%) than in 1999 (29%) were beyond the *early emergent/emergent* reading stage by the end of the year. Nonetheless, almost one-fourth of both kindergarten and first-grade students, and one-third of second-grade students, were identified as needing extra reading support at the next grade level because they were behind the majority of students in the acquisition of reading skills. In contrast, fewer grade 2 students (18%) and grade 3 students (9%) were identified as needing extra support in writing.

As for mathematics performance, slightly fewer kindergarten students in 2000 (11%) than in 1999 (12%) remained at the *pre-emergent* stage of mathematics development and were identified as needing extra support in the next school year. However, the percent of grades 1-5 students demonstrating proficiency in none of the mathematics strands or in only one of the four strands ranged from 13% at first grade to 22% at grades 3-5.

### Background

In early 1999, the North Carolina State Board of Education instituted Policy HAS-C-016, mandating that school districts implement assessments at kindergarten, first, and second grades. The use of grades K-2 assessments is required, for the first time, in all NC elementary schools during the current school year, 2000-2001. Local school districts have the option of using state-developed assessment materials, adaptations of those materials, or unique assessments adopted by local school boards.

The K-2 assessments adopted by the Wake County Public School System (WCPSS) are used to monitor achievement of objectives in the *North Carolina Standard Course of Study*, and include (1) documented, on-going individualized literacy and mathematics assessments throughout the school year and (2) a summative evaluation at the end of the year. As early as 1995, WCPSS had already chosen to adapt, expand, and implement state-developed literacy and mathematics assessment materials in grades K-3. The *Kindergarten Developmental Profile* (charting both

reading and mathematics progress) was implemented first, and the *Mathematics Observation Profiles* for grades 1-5 and the *Literacy Assessment Profile* for grades 1-3 have been used system-wide since 1997. A new literacy assessment for grades 3-5 was piloted in 1999-2000 and, after teacher training is completed, will be implemented in 2001-2002.

As set forth in State Board of Education policy, the purposes of literacy and mathematics assessments in the early grades are to provide:

- current teachers with information about the progress of each student for instructional adaptations and early interventions,
- next-year teachers with information about the status of each of their incoming students,
- parents with information about the status of their children relative to grade-level standards at the end of the year, and
- schools and school districts with information about the achievement status and progress of groups of students as they move from kindergarten through the early grades.

Results of assessments in the early grades (K-2) are for local use only. There is no reporting of results to the NC Department of Public Instruction or State Board of Education. For clarification, a summary of all the types of formal assessment used in grades K-5 are shown in *Attachment 1*. This report deals only with the assessment data recorded on instructional *Profiles*.

### Assessment Materials and Procedures

WCPSS teachers in grades K-5 use "*Profiles*", based on a checklist of specific goals and objectives from the *NC Standard Course of Study*, to keep track of students' progress during the school year. The *Profiles* are lightweight cardboard folders, printed with specific goals and objectives, on which teachers record their observations of student performance on those objectives during the school year. Before using the *Profiles*, all K-5 teachers complete 12-18 hours of professional development in the use of the mathematics and literacy assessment materials. In-coming teachers participate in the training as soon as possible.

At regular intervals throughout the school year, typically near the end of each quarter, teachers indicate a student's progress on the objectives listed on the literacy and mathematics *Profiles* for that student. Each rating is based on teacher observations of a student's demonstrated level of performance, and should reflect multiple demonstrations of an objective by the student. For instance, the literacy assessment consists of teacher observations of a student's reading behaviors - such as oral reading performance, types of reading strategies used, and elements understood while reading - as well as a demonstrated stage of writing development. (More detail is provided in the discussion below.) Supporting documentation - such as work samples, journal entries, and formal assessments - can be placed in the cardboard *Profiles*.

Similarly, the mathematics *Profiles* for grades 1-5 are used for recording teacher observations of student level of performance (I-IV) in four curriculum content areas called "strands". Kindergarten *Profiles* indicate progress as students advance through the initial stages of mathematics development, and do not assess performance in individual strands of the curriculum.

At the end of each school year, WCPSS K-5 teachers complete a one-page K-5 Assessment Data Capture Form, designed by the Evaluation & Research Department, to electronically capture the summary assessment information recorded by teachers on each student's *Mathematics Observation Profile*, *Reading Continuum Profile*, and *Writing Continuum Profile*.

One purpose for the development of the WCPSS early grades assessments and subsequent teacher training was to ensure uniformity of measurement method and materials. However, since all *Profiles* ratings are based on teacher judgment, some cautions must be kept in mind when interpreting K-5 assessment results. The *Profiles* ratings are more subjective in nature than standardized test results and, thus, have lower statistical reliability than the NC End-of-Grade test scores in grades 3-8. Also, the data capture forms and the cut-off points defining proficiency in grades K-5 were subject to slight changes in the early stages of implementation, and curriculum revisions at the state level have resulted in corresponding revisions to the WCPSS *Profiles*. For example, the 1999-2000 mathematics *Profiles* differ from earlier versions because, in a revised *NC Standard Course of Study*, seven mathematics strands (content areas) of previous years were collapsed into four strands (described below). Therefore, in most instances, this report is limited to 1999-2000 assessment results, rather than comparisons of student performance across school years.

### **Grades K-5 Assessment Results, 1999-2000**

Results reported in this bulletin reflect the status of all WCPSS students in the early grades as of June 2000. Student stages of development and proficiency levels are summarized for WCPSS both by subject area (reading, writing, and mathematics) and grade level.

### **Literacy Assessment Results**

#### **READING**

The discussions below summarize grades K-3 reading assessment results by (1) stages of reading development, (2) number of print concepts mastered by kindergarten students at the beginning (*early emergent/emergent*) stage of reading development, and (3) reading book levels. Since a literacy assessment system for grades 4 and 5 is still in development, references to reading levels for 4<sup>th</sup>- and 5<sup>th</sup>- grade students identify only those children who are still in the primary-grades stages of development.

#### **Stages of Reading Development**

The four stages of reading development in the WCPSS K-3 reading curriculum are *early emergent/emergent*, *developing*, *early independent*, and *independent*. Student progression through the four stages is shown in *Table 1*. At the kindergarten level, 62% of students were identified by teachers as *early emergent/emergent* readers at the end of the 1999-2000 school year, while 80% of first-grade students were identified as *developing* and *early independent* readers. In turn, 48% of grade 2 students were considered *independent* readers and, at the end of grade 3, the percent of students identified as *independent* (stage 4) readers had increased to 76%.

**Table 1: Percent of WCPSS Students in Grades K-5 at Each Stage of Reading Development.**

	Stages of Reading Development				
	Early Emergent/ Emergent	Developing	Early Independent	Independent	No Data Reported
Grade K	62.2	33.9	2.5	0.4	1.0
Grade 1	6.9	42.4	38.0	10.8	1.9
Grade 2	1.7	9.2	37.4	48.4	3.3
Grade 3	1.3	4.0	14.8	75.9	4.0
Grade 4	0.6	1.4	2.0	3.3	92.7
Grade 5	0.4	0.9	1.3	2.8	94.6

Note: At grades 4 and 5, teachers used the literacy *Profiles* and related materials only with students reading below Book Level 32.

In grades 4 and 5, stages of reading development were reported only for the 5-7% of students reading at or below Book Level 32 (which is at the top of the *independent* reading stage). See *Attachment 2* for information regarding progress through reading stages by some subgroups of the WCPSS grades K-2 student population.

#### Print Concepts for Kindergarten Students at the First Stage of Reading Development

Students functioning at the beginning (*early emergent/emergent*) stage of reading development are expected to master 19 print concepts. Some examples of these concepts are whether a student handles books appropriately; follows print word for word; understands directionality (reads text top to bottom and left to right); and is able to distinguish between letters, words, and sentences. Below in *Table 2* is a two-year comparison of the number and percent of print concepts mastered by kindergarten students at the *early emergent/emergent* reading stage.

**Table 2: Number and Percent of WCPSS Kindergarten Students at the Early Emergent/Emergent Reading Stage Demonstrating Mastery of Print Concepts**

	Print Concepts Mastered				K Students Above EE/E Stage	No Data Re: Stages
	11 or less	12 to 16	17 to 19	No Data		
<b>1999</b>						
Number of Students	339	869	3,673	271	2,192	79
Percent of Students	5%	12%	49%	4%	29%	1%
<b>2000</b>						
Number of Students	465	920	3,305	266	2,935	86
Percent of Students	6%	12%	41%	3%	37%	1%

Note: The shaded areas indicate number and percent of kindergarten students below the cut-off point (17 print concepts), an indicator of need for additional reading support at the next grade level (Grade 1).

Seventy percent of kindergarten students in 1999 and 62% in 2000 were in the *early emergent/emergent* reading stage at the end of the school year. Of all kindergarten students, 17% in 1999 and 18% in 2000 had mastered less than 17 print concepts, one of the cut-off points or indicators used for identifying students in need of extra reading support during the next school year.

#### Reading Book Levels

There are 32 reading book levels through which students advance as they become more proficient readers. Different books, emphasizing and enhancing specific reading objectives, are available



for each of the 32 book levels. Typically, the reading book levels – and corresponding reading stages - for each grade are as follows:

- Kindergarten..... Book Levels 1-4 ..... *early emergent/emergent* reading stage
- Grade 1 ..... Book Levels 5-16..... *developing* reading stage
- Grade 2 ..... Book Levels 17-24.... *early independent* reading stage
- Grade 3 ..... Book Levels 25-32.... *independent* reading stage

The typical range of book levels at grades 1, 2, and 3 is wider than that at kindergarten, with the greatest range or variation at grade 1. As shown in *Table 3*, about 41% of kindergarten students were reading at Book Levels 1-4 at the end of the 2000 school year, and another 33% were

**Table 3: Percentages of Students in Grades K-5 at Reading Book Levels from None (Not Yet at Level 1) to 32**

	Reading Book Levels									No Data Reported
	None	1-4	5-8	9-12	13-16	17-20	21-24	25-28	29-32	
Grade K	24.2	40.5	19.3	5.9	3.1	1.9	1.4	0.9	0.3	2.5
Grade 1	1.5	5.3	7.2	9.0	20.0	19.0	15.2	11.1	10.2	1.3
Grade 2	0.8	0.9	1.8	2.3	3.9	7.2	16.7	23.8	41.1	1.5
Grade 3	0.7	0.6	0.8	1.0	1.1	2.4	4.9	12.4	72.5	3.6
Grade 4	0.1	0.4	0.4	0.6	0.5	0.6	1.0	1.7	2.8	91.9
Grade 5	0.1	0.6	0.3	0.3	0.3	0.3	0.6	0.8	2.5	94.2

Note 1: Shaded areas indicate the percentage of students below the cut-off points at grades K-2. These are the students identified as needing extra support in reading at the next grade level.

Note 2: At grades 4 and 5, data were reported only for students reading at or below Book Level 32.

reading at higher levels. In contrast, 73% of third-grade students were reading at Book Levels 29-32 by the end of the year. Notably, 24% of kindergarten students were not yet reading at Book Levels 1-2 (which has been identified as one indicator or predictor of a possible need for extra support and perhaps retention).

The criteria, established by WCPSS Curriculum and Instruction specialists, for identifying students needing extra reading support are as follows:

- Students entering Grade 1 not yet reading at Book Levels 1-2, or with mastery of print concepts less than 17,
- Students entering Grade 2 reading at a book levels less than 15-16, and
- Students entering Grade 3 reading at a book levels less than 23-24.

About one-fourth of kindergarten and first-grade students, and one-third of second-grade students were identified as needing extra reading support at the next grade level. As shown in the last column of *Table 3*, no assessment data were reported for some students. In 1999-2000, the data capture form provided no way to distinguish between K-3 students reading above Book Level 32 and K-3 students with no data reported.

**WRITING**

Writing *Profiles* are also used to record and monitor K-3 literacy development. The stages of writing are derived from the *NC Benchmarks of Proficiency in Writing*. Similar to the stages of reading, the four writing stages are *emergent*, *developing*, *early independent*, and *independent*.

**Table 4: Percent of WCPSS Students in Grades K-3 at Each Stage of Writing Development**

	Stages of Writing				No Data Reported
	Emergent	Developing	Early Independent	Independent	
Grade K	57.6	40.0	1.4	0.1	0.9
Grade 1	6.8	57.8	31.1	3.3	1.0
Grade 2	2.1	16.0	51.8	29.0	1.1
Grade 3	1.9	7.4	28.4	61.2	1.1
Grade 4	0.6	1.1	1.9	2.5	93.3
Grade 5	0.3	0.6	0.8	0.4	97.9

Note: Shaded areas indicate percentage of students identified as needing extra support in writing at the next grade level.

As indicated in *Table 4*, at the end of the 1999-2000 school year, about 58% of kindergarten students were in the first or *emergent* stage of writing, with another 40% in the *developing* stage. At grade three, however, almost 90% of the students were in the top two stages of writing development: 61% at the *independent* stage and another 28% at the *early independent* stage. Beyond grade 3, some teachers used the K-3 writing *Profiles* with students identified as needing extra support in writing: about 6% of students in grade 4 and 2% of students in grade 5.

### Mathematics Assessment Results

*Mathematics Observation Profiles* are somewhat different from reading and writing *Profiles*, with a unique math *Profile* for each grade level. As with the literacy *Profiles*, teachers identify and mark student mastery of skills on the *Mathematics Profiles* and store samples of student work in the folders.

#### Stages of Mathematics Development for Kindergarten Students

As shown in *Table 5*, at the end of the 1999 and 2000 school years, the percentages of kindergarten students at each of the three stages of mathematics development were similar, with a slight increase of students at the highest level, the *developing* stage.

**Table 5: Percent of WCPSS Kindergarten Students at Each Stage of Mathematics Development**

	1999	2000
<i>Pre-Emergent Stage</i>	12%	11%
<i>Emergent Stage</i>	57%	54%
<i>Developing Stage</i>	31%	35%

Kindergarten students in the *pre-emergent* stage of mathematics development at the end of the 1999-2000 school year were identified as needing extra support at the next grade level (1<sup>st</sup> grade).

#### Off-Grade-Level Mathematics Performance

As mentioned earlier, separate mathematics *Profiles* are designed for each grade, 1-5. As indicated in *Table 6*, some students used instructional materials and *Profiles* above or below



grade level. For example, at the end of the 1999-2000 school year, about 81% of first-grade students were using instructional materials for attaining the first-grade *Profile* goals, and 19% of students were using above-grade-level instructional materials and *Profiles*. The highest percent of students using above-grade materials and *Profiles* was at grade 1.

**Table 6: Percent of WCPSS Students in Grades K-5 Using Instructional Materials and Profiles below Grade Level, at Grade Level, and above Grade Level**

	Percent Using Math Instructional Materials & Profiles		
	<u>Below</u> Grade Level	<u>At</u> Grade Level	<u>Above</u> Grade Level
Grade K	N/A	98.1	1.9
Grade 1	0.8	80.5	18.7
Grade 2	9.0	75.7	15.3
Grade 3	12.3	71.5	16.2
Grade 4	16.9	83.1	0
Grade 5	32.2	62.8	0

Overall, as grade level increased, the percent of students using mathematics instructional *Profiles* below grade level increased from less than 1% at grade 1 to 32% at grade 5. It is unclear why no fourth- and fifth-grade students were reported as working with above-grade-level materials.

#### Student Proficiency in the Four Mathematics Strands

As noted earlier, changes to the *NC Standard Course of Study* result in corresponding curriculum revisions at the local level. Thus, the WCPSS mathematics *Profiles* for the 1999-2000 school year differ from earlier mathematics *Profiles* because, at the state level, the mathematics curriculum was collapsed from seven mathematics strands into four “strands” or areas of curriculum content. At grades 1-5, mathematics development is currently gauged by demonstrated proficiency in the following four strands:

- Number sense, numeration, and numerical operations.
- Spatial sense, measurement, and geometry.
- Patterns, relationships, and functions.
- Data, probability, and statistics.

The goals and objectives for each strand are listed on students’ mathematics *Profiles*. For each of the four strands, teachers mark the level of proficiency, I-IV. A student is considered proficient in a mathematics strand if his/her performance is at Levels III or IV (rather than Levels I or II). The percent of students, in grades 1-5, rated by teachers as demonstrating proficiency in each type of mathematics strand is shown in *Table 7*.

Although proficiency rates were slightly higher in grades 1 and 2 than in other grades at the end of the 1999-2000 school year, there were only small differences in proficiency rates across the four strands. At grade four, the proficiency rates (percentage of students performing at achievement levels III and IV) in the four mathematics strands were almost identical.

**Table 7: Percent of WCPSS Students in Grades 1-5 Who Demonstrated Proficiency (Performance Levels III and IV) in the Four Mathematics Strands**

	<i>Mathematics Strands</i>			
	Number Sense	Spatial Sense	Patterns & Functions	Data & Statistics
Grade 1	82	82	85	79
Grade 2	80	80	79	75
Grade 3	76	75	74	76
Grade 4	75	75	74	74
Grade 5	77	76	73	75

See *Attachment 3* for the percentage of students by grade at each level of proficiency (I, II, III, and IV) for all mathematics strands. *Attachment 4* contains percentages of students, by subgroups, at performance levels I and II (not demonstrating proficiency) in grades 1-5.

#### Number of Mathematics Strands in Which Students Are Proficient

While *Table 7* indicates the percent of students rated by teachers as proficient in each mathematics strand, *Table 8* below indicates the percent of students who, based on teacher ratings, demonstrated proficiency in zero, one, two, three, or all four of the mathematics strands. Any student not demonstrating proficiency in at least two of the mathematics strands was identified as needing extra resources.

**Table 8: Percent of WCPSS Students by Grade Who Were Rated as Proficient (Performance Level III or IV) in One, Two, Three, Four, or No Mathematics Strand(s)**

	% Proficient in No Math Strands	% Proficient in 1 Math Strand	% Proficient in 2 Math Strands	% Proficient in 3 Math Strands	% Proficient in 4 Math Strands
<i>Grade 1</i>	11.6	2.2	3.6	6.8	75.8
<i>Grade 2</i>	13.1	3.8	9.2	7.6	66.3
<i>Grade 3</i>	17.7	4.4	4.4	5.2	68.3
<i>Grade 4</i>	18.2	4.1	5.0	6.0	66.7
<i>Grade 5</i>	18.5	3.7	4.1	6.0	67.7

As expected, at each grade level, a majority of students demonstrated proficiency in all four of the mathematics strands. However, while the percent of students proficient in four strands was almost the same in grades 2-5, the percent of students not demonstrating proficiency in any math strand increased with grade level, from 12% at grade 1 to about 19% at grade 5.

#### Summary

More kindergarten students in 2000 (37%) than in 1999 (29%) were beyond the *early emergent/emergent* reading stage by the end of the year. Nonetheless, almost one-fourth of both kindergarten and first-grade students, and one-third of second-grade students, were identified as needing extra reading support at the next grade level because they were behind the majority of

students in the acquisition of reading skills. In contrast, fewer grade 2 students (18%) and grade 3 students (9%) were identified as needing extra support in writing.

As for mathematics performance, slightly fewer kindergarten students in 2000 (11%) than in 1999 (12%) remained at the *pre-emergent* stage of mathematics development and were identified as needing extra support in the next school year. However, the percent of grades 1-5 students demonstrating proficiency in none of the mathematics strands or in only one of the four strands ranged from 13% at first grade to 22% at grades 3-5.

Based on the new WCPSS standards, 17-24% (reading) and 11-22% (mathematics) of the 1999-2000 students in grades K-2 were identified as needing instructional support in the next school year. Support for students not performing at grade level comes from a variety of sources. Classroom teachers and assistants try to differentiate instruction based on student needs, and support for all areas can come through programs such as special education, English as a Second Language, Communities in Schools, or individual school initiatives. The system-wide Accelerated Learning Program (ALP) provided reading and math support in grades 3-8 last year and is doing so again this year. ALP is being expanded to include literacy support in grades K-2 for the 2001-2002 school year. An E&R publication, *Impact of Accelerated Learning Program (ALP) and Other Assistance, 1999-2000*, is available.

### References

- *Impact of Accelerated Learning Program (ALP) and Other Assistance, 1999-2000*, E&R Report 01.03.
- *NC Standard Course of Study*, NC Dept. of Public Instruction, 1989/1992/1999.
- WCPSS "Grades K-5 Assessment Data Capture Form", E&R, 1998/1999/2000.
- WCPSS "K-5 Assessment Data Excel Spreadsheet" for each elementary school, E&R, August 2000.
- WCPSS Literacy Profiles:
  - *K-3 Literacy Assessment Reading Continuum Summative Profile*, Form 3008R, 1997.
  - *K-3 Literacy Assessment Writing Continuum Summative Profile*, Form 3008W, 1997.
- WCPSS *K-3 Literacy Assessment Expository Text Retelling Forms, Narrative Text Retelling Forms, and Print Concepts Checklist for Early Emergent/Emergent Readers with Administration Guide*, 1997.
- WCPSS Mathematics Profiles (with an *Observation Profile* for each grade, K-5), 2000.

### Attachments

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**Attachment 1:  
Types of Assessments in the Early Grades**

Grades K-2	<ul style="list-style-type: none"> <li>◆ Kindergarten Initial Assessment is required by WCPSS for students entering kindergarten.</li> <li>◆ <b>Local literacy &amp; mathematics assessments, recorded on <i>Profiles</i>, are required by the state.</b></li> </ul>
Grade 3	<ul style="list-style-type: none"> <li>◆ Third-grade pre-tests in reading and mathematics are required by the state.</li> <li>◆ <b>Local literacy assessments, recorded on <i>Profiles</i>, are required by WCPSS.</b></li> <li>◆ <b>Local mathematics assessments, using current <i>Profiles</i>, are optional in WCPSS.</b> (A new local on-going mathematics assessment for grades 3-5 is in development.)</li> <li>◆ Local-option mid-year EOG tests in reading and mathematics, available by school choice.</li> <li>◆ End-of-Grade tests in reading and mathematics are required by the state.</li> </ul>
Grades 4-5	<ul style="list-style-type: none"> <li>◆ The NC Writing Assessment in grade 4 is required by the state.</li> <li>◆ NC Open-Ended Assessments in reading and mathematics, grade 4, are required by the state.</li> <li>◆ Local-option mid-year EOG tests in reading and mathematics, available by school choice.</li> <li>◆ <b>Local literacy assessments, recorded on <i>Profiles</i>, are optional in WCPSS.</b></li> <li>◆ <b>Local mathematics assessments, using current <i>Profiles</i>, are optional in WCPSS.</b> (A new local on-going mathematics assessment for grades 3-5 is in development.)</li> <li>◆ <b>End-of-Grade tests in reading and mathematics are required by the state.</b></li> </ul>

Note: Only the literacy and mathematics assessments in bold above are discussed in this report

**Attachment 2:**  
**Percent of WCPSS Grades K-2 Students,**  
**by Subgroups, at each Stage of Reading Development in May, 2000**

	Reading Stages				
	Early Emerg./ Emergent	Developing	Early Independent	Independent	No Data Reported
<b>Kindergarten</b>					
All Students	62.0	34.0	2.5	0.4	1.1
White Females	50.7	43.4	4.5	0.5	0.9
White Males	57.1	39.1	2.2	0.5	1.1
Black Females	74.3	24.7	0.1	0.1	0.8
Black Males	80.4	17.4	0.6	0	1.6
Other Females	67.4	28.5	2.9	0.6	0.6
Other Males	71.6	24.2	2.3	0.7	1.2
White F/R Lunch	73.2	22.5	1.5	0.6	2.2
Black F/R Lunch	84.2	14.6	0.4	0	0.8
Other F/R Lunch	87.3	10.4	0.6	0	1.7
White Non-F/R Lunch	52.5	42.5	3.5	0.5	1.0
Black Non-F/R Lunch	66.4	30.5	1.1	0.1	1.9
Other Non-F/R Lunch	54.6	39.6	4.3	1.2	0.3
<b>Grade 1</b>					
All Students	6.9	42.4	38.0	10.8	1.9
White Females	1.6	39.8	43.1	13.9	1.6
White Males	3.3	35.1	46.3	13.4	1.9
Black Females	10.2	51.3	30.1	6.6	1.8
Black Males	14.7	54.3	23.7	4.7	2.6
Other Females	14.0	42.6	33.4	8.2	1.8
Other Males	18.6	43.0	29.7	6.8	1.9
White F/R Lunch	9.5	52.3	23.0	12.7	2.5
Black F/R Lunch	16.6	56.9	20.4	3.8	2.3
Other F/R Lunch	28.8	50.7	16.7	1.4	2.4
White Non-F/R Lunch	1.8	36.3	46.2	14.1	1.6
Black Non-F/R Lunch	5.6	46.0	37.8	8.8	1.8
Other Non-F/R Lunch	7.0	36.9	42.7	12.1	1.3
<b>Grade 2</b>					
All Students	1.9	10.7	43.1	40.4	3.8
White Females	0.5	2.5	31.1	63.6	2.3
White Males	0.6	6.0	35.7	54.0	3.7
Black Females	2.2	15.1	48.2	31.2	3.3
Black Males	4.6	20.4	48.1	23.7	3.2
Other Females	3.5	15.2	33.9	43.5	3.9
Other Males	4.3	17.7	35.5	36.9	5.6
White F/R Lunch	2.7	13.9	46.3	33.7	3.4
Black F/R Lunch	4.8	22.0	49.3	20.5	3.4
Other F/R Lunch	5.5	28.2	37.1	24.8	4.3
White Non-F/R Lunch	0.6	6.0	55.7	32.6	5.1
Black Non-F/R Lunch	1.6	14.9	64.3	15.2	4.0
Other Non-F/R Lunch	2.8	8.0	32.9	51.3	5.0

Note: Among the kindergarten students in the *Early Emergent/Emergent* reading stage, some were performing at or below Book Level 1.

**Attachment 3:**  
**Percentages of WCPSS Students by Grade at**  
**Each Performance Level (I-IV) in the Four Mathematics Strands**

	Mathematics Strands			
	Number Sense	Spatial Sense	Patterns & Functions	Data & Statistics
<b>Grade 1</b>				
Performance Level 1	2.6	2.6	2.3	3.4
Level 2	15.1	14.8	11.6	16.5
Level 3	71.4	76.0	77.8	72.8
Level 4	10.9	6.6	8.3	7.3
<b>Grade 2</b>				
Performance Level 1	2.3	2.40	2.5	3.6
Level 2	16.3	17.00	17.3	20.8
Level 3	70.4	72.3	71.9	68.9
Level 4	11.0	8.3	8.3	6.7
<b>Grade 3</b>				
Performance Level 1	3.6	4.6	4.8	4.9
Level 2	18.9	19.6	19.5	18.4
Level 3	58.8	61.0	60.0	61.2
Level 4	18.7	14.8	15.7	15.5
<b>Grade 4</b>				
Performance Level 1	4.0	4.8	4.9	5.3
Level 2	19.8	19.8	20.0	19.9
Level 3	53.4	55.4	55.4	55.4
Level 4	22.8	20.0	19.7	19.4
<b>Grade 5</b>				
Performance Level 1	4.2	4.8	5.3	5.1
Level 2	18.4	18.5	20.4	19.2
Level 3	49.6	52.2	50.6	51.4
Level 4	27.8	24.5	23.7	24.3

Note: The shaded boxes indicate areas of performance below the cut-off point for proficiency in a mathematics strand.



**Attachment 4:**  
**Percentages of WCPSS Students, by Grade and Subgroup, with**  
**Performance at Levels I and II (Not Proficient) in the Mathematics Strands in May, 2000**

	Mathematics Strands			
	Number Sense	Spatial Sense	Patterns & Functions	Data & Statistics
<b>Grade 1</b>				
All Students	17.6	17.2	13.8	19.7
White Males	8.8	8.4	7.2	10.6
White Females	4.2	7.8	5.3	9.3
Black Males	35.1	35.2	29.3	39.8
Black Females	32.0	32.5	24.8	34.6
Other Males	23.1	24.1	20.1	26.9
Other Females	25.5	24.6	20.6	28.9
White F/R Lunch	21.0	18.2	13.6	23.9
Black F/R Lunch	84.5	84.1	70.0	91.2
Other F/R Lunch	40.2	40.0	34.1	47.2
White Non-F/R Lunch	8.0	7.1	6.4	10.0
Black Non-F/R Lunch	20.5	17.9	62.8	86.5
Other Non-F/R Lunch	12.2	64.8	31.1	42.3
<b>Grade 2</b>				
All Students	18.4	19.2	19.6	24.0
White Males	9.6	10.1	10.2	14.4
White Females	9.4	9.2	10.5	12.9
Black Males	37.8	38.9	39.8	49.7
Black Females	37.2	40.5	39.7	43.0
Other Males	20.7	22.3	22.7	27.7
Other Females	24.3	24.9	24.3	28.1
White F/R Lunch	24.3	29.1	27.0	36.6
Black F/R Lunch	43.2	45.7	45.6	52.9
Other F/R Lunch	34.5	36.9	35.2	44.6
White Non-F/R Lunch	8.2	8.0	9.0	11.7
Black Non-F/R Lunch	28.0	24.9	29.9	36.8
Other Non-F/R Lunch	14.1	12.8	15.2	16.0
<b>Grade 3</b>				
All Students	22.2	23.8	23.8	22.9
White Males	10.8	12.1	12.1	11.7
White Females	11.3	12.5	12.3	10.9
Black Males	48.4	50.5	50.7	50.5
Black Females	47.6	49.9	49.7	48.6
Other Males	24.0	26.6	28.6	24.2
Other Females	25.9	27.4	27.6	27.6
White F/R Lunch	31.6	36.2	31.9	32.8
Black F/R Lunch	56.4	59.1	59.6	58.1
Other F/R Lunch	45.1	48.7	49.0	45.1
White Non-F/R Lunch	9.5	10.1	10.7	9.7
Black Non-F/R Lunch	34.4	31.2	35.0	35.7
Other Non-F/R Lunch	11.3	10.7	12.5	12.9

Note: Students with performance at Levels I and II in a mathematics strand are identified as needing extra mathematics support in the next school year. Performance at Levels I and II in two or more mathematics strands is one indicator or predictor of possible retention.

## -Continuation of Attachment 4-

	Mathematics Strands			
	Number Sense	Spatial Sense	Patterns & Functions	Data & Statistics
<b>Grade 4</b>				
<i>All Students</i>	23.5	24.2	24.5	24.8
<i>White Males</i>	14.1	13.4	14.7	14.4
<i>White Females</i>	13.1	13.6	12.7	12.7
<i>Black Males</i>	49.4	52.4	52.3	54.7
<i>Black Females</i>	45.3	46.1	47.3	48.0
<i>Other Males</i>	25.6	29.0	28.5	29.3
<i>Other Females</i>	23.8	26.8	26.5	25.7
<i>White F/R Lunch</i>	35.1	38.3	35.1	37.7
<i>Black F/R Lunch</i>	56.0	58.6	59.1	61.1
<i>Other F/R Lunch</i>	43.3	48.7	48.3	46.7
<i>White Non-F/R Lunch</i>	11.7	11.6	12.1	11.7
<i>Black Non-F/R Lunch</i>	29.3	34.8	35.4	36.3
<i>Other Non-F/R Lunch</i>	12.5	16.8	16.4	17.2
<b>Grade 5</b>				
<i>All Students</i>	22.3	23.0	25.4	24.0
<i>White Males</i>	14.0	14.1	16.6	14.7
<i>White Females</i>	11.3	11.6	13.6	12.2
<i>Black Males</i>	46.5	49.2	52.6	51.2
<i>Black Females</i>	41.8	43.8	46.0	45.2
<i>Other Males</i>	25.6	26.5	27.0	26.7
<i>Other Females</i>	31.4	32.8	36.6	33.7
<i>White F/R Lunch</i>	36.7	38.3	41.6	39.5
<i>Black F/R Lunch</i>	52.7	55.2	58.3	57.0
<i>Other F/R Lunch</i>	51.0	53.0	56.8	56.1
<i>White Non-F/R Lunch</i>	10.5	11.0	13.2	11.6
<i>Black Non-F/R Lunch</i>	27.8	33.9	36.3	35.6
<i>Other Non-F/R Lunch</i>	10.7	13.2	14.1	11.9

Note: Students with performance at Levels I and II in a mathematics strand are identified as needing extra mathematics support in the next school year. Performance at Levels I and II in two or more mathematics strands is one indicator or predictor of possible retention.

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