

2004-05 Class Size Report

Introduction:

The 2004-05 Class Size Report reflects data collected during the week of September 13-17, 2004. Class size data provide information about the Division and individual schools including mean class size, frequency of class sizes, range of class sizes, and percentages of classes within monitored ranges. These data represent information for all core content classes including world languages in middle and high schools and “homeroom” data for elementary schools. Also reported are enrollment data for the Junior ROTC pilot program at Monticello High School and the non-European language pilot programs in all comprehensive high schools. Mean class sizes are not reported for non-core classes except for Health/PE, which is included in the appendix along with elementary mean sizes by school by grade and the frequency of class sizes by school level. Use of emergency staffing to date is also reported in the appendix. Trend data are reported for a period consistent with prior class size reports to the Board. Questions answered through data analysis include:

- What is the mean class size for the Division and for each school?
- What is the range of mean class sizes for the Division and for each school?
- What is the frequency of class sizes for the Division?
- What is the range of class sizes for the Division?
- For the monitored range of classes above 25 (elementary) or 27 (middle and high) students, why are some classes larger, and what strategies are schools using, where appropriate, to address learning needs in these classes?

The Strategic Plan for Albemarle County Public Schools identifies databased decision-making as critical to the continuous improvement of the Division and each school. The data and information in the Class Size Report present the Board and Division staff with the opportunity to ask further questions about class size reduction initiatives and student achievement at both the Division and school levels. Information provided in the Annual Progress Report to the Board coupled with the Class Size Report affords our Board members and Division staff with data essential to an informed discussion of the impact of class sizes upon student achievement.

Elementary Schools:

The Division *mean size* of elementary school homerooms is 19.93 students per classroom. Mean class sizes *range* across individual schools from 14.33 at Yancey Elementary to 22.62 at Hollymead Elementary. Other teachers in schools, such as Title I teachers, PE teachers, etc., traditionally do not have students assigned to homerooms so the mean class sizes are based upon the *actual numbers* of students assigned to kindergarten, first, second, third, fourth, fifth, and cross-grade (combination) classrooms (e.g. K/1). Factors causing variance in mean class sizes across elementary schools include:

- the differentiated staffing formula used in this Division,
- state Standards of Quality(SOQ) Class Size Reduction Initiative for K-3, and
- building-level decisions to use Full-time Equivalencies (FTEs) to staff programs or grade levels beyond division/state minimal requirements based upon the learning needs of students and issues specific to a particular school community.

The Full-Time Equivalencies (FTEs) assigned to schools for staffing purposes also fund teaching assistants, librarians, music, art, PE, guidance, literacy specialists, gifted resource, technology, and intervention staff for each school. Along with support staff including special education and Title I teachers, these additional staff may support regular classroom teachers in collaborative teaching of reading and math groups and integrated lessons in science and social studies, character education, health, etc. Therefore, in schools where mean or actual class sizes appear large, the use of these additional staff members can reduce large groups into several smaller groups for core instruction.

Mean Size Data for Elementary Schools* (Table1)

<i>School</i>	<i>Mean Size</i>	<i>Classrooms(Number)</i>
Agnor-Hurt	19.75	20
Baker-Butler	20.64	22
Broadus Wood	20.93	15
Brownsville	19.44	18
Cale	19.70	27
Crozet	20.78	18
Greer	19.65	20
Hollymead	22.62	21
Meriwether Lewis	20.45	20
Murray	22.00	13
Red Hill	16.64	11
Scottsville	18.10	10
Stone- Robinson	21.14	21
Stony Point	18.55	11
Woodbrook	18.56	16
Yancey	14.33	9
<i>Division</i>	<i>19.93</i>	<i>272</i>

Division and school *grade level mean sizes* detail a clearer picture of variance across classrooms. Through differentiated staffing and state class size reduction funding, elementary school principals attempt to reduce class sizes in the K-3 grades below those of 4-5 class sizes. Schools that serve moderate to high at-risk populations must meet state guidelines for K-3 class size reduction. These SOQ ratios are 20:1 student/FTE for moderately at-risk populations and 18:1 student/FTE for high at-risk populations.

Division Mean Size by Elementary Grade Level* (Table 2)

<i>Grade Level</i>	<i>Mean Size</i>	<i>Classrooms(N)</i>
Kindergarten	18.07	46
K/1	19.00	7
First	19.19	43
1/2	18.50	2
Second	20.49	43
Third	20.21	42
Fourth	20.22	45
Fifth	21.68	44

Variation in mean class size for individual schools by grade levels is reported in Table 3 in the appendix. The same factors that explain why mean sizes vary across schools also explain why mean sizes vary across grade levels. For example, the number of students enrolled varies from grade to grade. Principals uniquely address variations through multiple strategies including:

- increasing the number of teachers assigned to the grade level,
- adding teaching assistance staff to support larger classes,
- employing part-time teachers during reading and math blocks,
- using licensed support staff such as special education, gifted, or Title I to collaboratively teach during specific instructional blocks.

Because mean size does not reflect the range of actual sizes in individual classrooms across the Division or in individual schools, *actual class size and frequency data* provide more in-depth information about actual numbers of students assigned to regular classrooms. Actual class sizes range across the Division from 10 students in a fourth-grade homeroom at Yancey Elementary to 28 students in a fifth-grade homeroom at Scottsville Elementary and two fifth grade homerooms at Broadus Wood. *As reported in the Division class size frequency table in Table 4 in the appendix,* 96.0% of the elementary classrooms contain 25 or fewer students, 80.9% of classrooms contain 22 or fewer students. Four percent or 11 classrooms contain 26-28 students. Of note, the school Division trend data show that the Division had 272 elementary classrooms in both September 2004 and 2003, compared with 277 in both September 2001 and 2002.

Longitudinal frequency data for monitored ranges of actual numbers of students in each homeroom classroom in the Division are reported below for K-3 and 4-5 in tables 5 and 6. For example, in both 2003 and 2004, there were no K-3 classes in the Division with *more* than 27 students in a homeroom, but there were three classrooms of fourth or fifth graders with 28 students assigned to a homeroom teacher. In 2002, there were no K-3 classes with more than 27 students in a homeroom and two fourth or fifth grade classrooms with 28 students assigned to one homeroom teacher. In 2001, no classrooms in the Division had more than 27 students assigned to a homeroom.

Longitudinal Frequency Data for K-3 Actual Class Sizes (Table 5)

<i>Year:</i>	<i># Classrooms < 20 students</i>	<i># Classrooms 20-24 students</i>	<i># Classrooms 25-27 students</i>	<i># Classrooms 28-31 students</i>	<i>Total # Classrooms</i>
2004	91	83	9	0	183
2003	83	96	1	0	180
2002	109	76	1	0	186
2001	101	80	2	0	183

Notes on Specific Schools:

1. A third-grade class at Hollymead contains 26 students in the homeroom; however, the use of a half-time teacher in the mornings helps reduce the size of instructional groups. Although second-grade classes do not exceed 25, they average 24.33 students; therefore, an additional second-grade teacher is being hired to address the issue.
2. A third-grade class at Murray contains 27 students. During key instructional times, however, this class is subdivided into much smaller classes for small-group instruction. A part-time teacher was hired for two sections of fifth-grade math instruction and one section of third-grade instruction. With the assistance of the gifted resource teacher, a special education teacher, and resource staff, the third-grade class splits into five groups for literacy instruction. In addition, a teaching assistant, teacher cadets from Western Albemarle High School and parent volunteers also spend time with small groups of students as appropriate to the needs of the third grade class.

Longitudinal Frequency Data for Grade 4-5 Actual Class Sizes (Table 6)

<i>Year:</i>	<i># Classrooms < 20 students</i>	<i># Classrooms 20-24 students</i>	<i># Classrooms 25-27 students</i>	<i># Classrooms 28-29 students</i>	<i>Total # Classrooms</i>
2004	26	49	11	3	89
2003	41	39	9	3	92
2002	38	41	10	2	91
2001	36	48	10	0	94

Notes on Specific Schools:

1. Broadus Wood Elementary has two fifth-grade classrooms of 28 students each; however, the only time the classes are intact as groups of 28 students is during homeroom. A part-time teacher teaches social studies and language arts, and the gifted resource teacher teaches an additional math class. This means that for all blocks of core instructional time, there are three teachers for that group of students.
2. Hollymead Elementary has two fifth-grade classrooms with 26 students each and another fifth-grade classroom with 27 students. An additional fifth-grade teacher has been hired, which will enable the creation of a fourth classroom.

3. Two fifth-grade classes at Crozet Elementary contain 26 students. A five-hour teaching assistant helps support fifth grade. In addition, the gifted resource teacher assists with strategic grouping for instruction in core content areas.
4. Murray Elementary has a fifth-grade classroom with 26 students. For small group instruction, three different groups of students rotate between three teachers for various content periods four out of five days a week. As a result, there are three different social studies/writing groups, three different math groups, and three different language arts/word study groups each day when those content areas are taught. In addition, the special education resource teacher takes groups of students during math and language arts instruction, and the gifted resource teacher will work with groups later in the fall during literacy instruction, making the groups of students still smaller. A five-hour teaching assistant is also assigned to fifth grade.
5. Scottsville Elementary has a fifth-grade classroom with 28 students. A former full-time teaching assistant (employed at Scottsville in past years) is currently completing 12 weeks of student teaching in fifth grade. At the end of her student teaching, she will continue to work in the classroom full-time as a teaching assistant. Further, in most teaching situations, the class is divided into two groups. The literacy specialist and gifted resource teacher push in or pull out at different times, making group sizes even smaller. Finally, two special needs students in the large group receive special instruction in reading and math from the special education teacher.
6. A fifth-grade classroom at Stone-Robinson Elementary has 27 students. This is reduced to 26 or fewer students except for music through special education resource program support from the special education teacher or a teaching assistant. During the literacy block, the resource teacher and the literacy specialist each work with a group of students. During math, there is one combination 4/5 class that brings the average across the three fifth-grade classes to 21 per class. Additionally, the fifth grade received six hours of TA assistance to reduce the student/teacher ratio and to assist students in social studies and science.

Middle Schools:

As reported in Table 7 below, the Division *mean size* of middle school core content and world languages classrooms is 20.80 students per classroom. Mean class sizes *range* across individual schools from 19.25 at Henley Middle School to 23.35 at Sutherland Middle School. Factors causing variance in mean class sizes across middle schools include:

- the differentiated staffing formula used in this division, and
- building-level decisions to use Full-time Equivalencies (FTEs) to staff programs (e.g., exploratory programs), grade levels, core content classes beyond division/state minimal requirements based upon the learning needs of students and issues specific to a particular school community
- doubleblocking of math and/or language arts classes.

As with elementary schools, the Full-time Equivalencies (FTEs) assigned to schools for staffing purposes also fund teaching assistants, librarians, exploratory, PE, guidance, literacy specialists, gifted resource, strings, technology, and intervention staff for each

school. Special education staff may support regular classroom teachers in collaborative teaching within core content classrooms as well as provide pull-out self contained or resource support to students outside regular classroom instruction. Two middle schools, Walton and Burley currently qualify for Title I support.

Mean Class Sizes Data for Middle Schools (Table 7)

<i>School</i>	<i>Mean Size</i>	<i>Number of Classrooms(N)</i>
Burley	19.60	67
Henley	19.25	133
Jouett	20.26	118
Sutherland	23.35	94
Walton	22.16	82
<i>Division</i>	<i>20.80</i>	<i>494</i>

Mean size by grade levels is not included for middle schools since the focus is on core content and world languages classrooms rather than grade levels. Typically, mean class sizes in core content classrooms vary according to the level of course—practical, standard, advanced/honors, and honors. Differentiation of course levels is phased in from sixth to eighth grade with focus on reducing class sizes in levels where students at risk for academic success are typically scheduled. Eighth grade math, language arts, and world languages mean class size data are presented as information (some students in math 8 are seventh graders) in Table 8 to demonstrate comparisons across levels of class sizes and for high school credit courses taught in middle schools.

Division Mean Size Comparisons for Course Levels in Middle Schools* (Table 8)

<i>Math Level</i>	<i>Mean Size</i>	<i>Language Arts Level</i>	<i>Mean Size</i>	<i>World Languages</i>	<i>Mean Size</i>
Honors Geometry	18.29*	LA 8 Adv/Honors	24.06	Spanish I Adv	22.44
Honors Algebra	26.82	LA 8 Standard	19.05	French I Adv	21.33
Math 8/Pre-Alg	21.15	LA 8 Practical	10.20		
Math 8 Standard	20.55				
Math 8 Practical	12.50				

*includes one section meeting at Albemarle High School

Actual middle school class sizes range across the Division from 10 or fewer students in practical level classrooms to 32 students in an Advanced French I class. Changes in practical level class enrollments occur throughout September as students are assessed and placed in these classes to receive intervention such as provided through the *Language!* literacy program. The goal for class size in practical level language arts is 10 or fewer students. *As reported in Table 9 in the appendix*, 92.5% of the middle school classrooms contain 27 or fewer students and 56.7% of classrooms contain 22 or fewer students. 7.5% or 37 classrooms contain 28-32 students. Of note, the school Division trend data show that the Division had 568 core content and world languages middle school classes in 2001 compared to 524 classes in 2002, 484 in 2003, and 494 in 2004.

Longitudinal Frequency Data for Actual Middle School Class Sizes (Table 10)

<i>Student Numbers in Classrooms</i>	<i>Year</i>	<i>Burley # of classes</i>	<i>Henley # of classes</i>	<i>Jouett # of classes</i>	<i>Sutherland # of classes</i>	<i>Walton # of classes</i>	<i>Total # of classes</i>
20 or fewer	2004	36	76	61	27	25	225
	2003	30	65	51	22	33	201
	2002	32	47	72	27	38	216
	2001	32	52	39	37	67	227
21-27	2004	28	54	57	43	50	232
	2003	32	61	60	50	46	249
	2002	30	73	56	69	43	271
	2001	57	69	62	70	59	317
Over 27	2004	3	3	0	24	7	37
	2003	0	4	5	17	8	34
	2002	2	1	3	21	10	37
	2001	0	3	5	8	8	24

Notes on Specific Schools:

1. Sutherland has nine math, four language arts, four science, six social studies, and one world languages classes with over 27 students. Sutherland has double periods of math and language arts daily, so that students have more time to master the concepts and skills. The math and literacy specialists work with all three grade levels to support student learning and professional growth in instructional strategies and assessments. In addition to the intervention specialists, the gifted resource teacher, special education teachers, and teaching assistants also push-in to classes to support reduced group instruction. Finally, Sutherland has a priority of keeping practical- and standard-level classes low in student numbers, which pushes up the numbers in advanced/honors classes. Eighteen of the 24 classes over 27 students are in advanced/honors level classes.
2. Burley has three classes with more than 27 students. Two of these classes, an eighth grade social studies class and an eighth grade science class, are paired, meaning that the same students are in the classes. The gifted resource teacher offers support in these classes through a collaborative model. The other large class is an Honors Algebra I section at the seventh grade level. The principal has been looking for a part-time teacher since school opened, but to date has been unsuccessful.
3. Henley has three core classes with over 27 students. Two are sixth grade advanced/honors level math classes. The large sizes were the result of late enrollment combined with team balances. The principal is monitoring the situation and expects movement of one or two students out of these classes. The teacher is the Math Lead teacher and very talented in the area of differentiation. The other large class is French I, which is at 32 students due to using a more inclusive model that admitted some students who wanted to take the class despite not having been recommended for it. The principal expects that some students may self-select out of the class, but wanted to give students a chance to take the course.

4. Walton has seven class sections with more than 27 students in them. Because enrollment at Walton was higher than projected, new full-time language arts and math teachers will be hired, which will help lower enrollments in these classes. All language arts and math classes meet in double blocks; while this means that fewer classes are offered, students receive more instructional time. Walton administration will continue to monitor the progress of all larger sections, and is prepared to offer additional support if needed.

Comprehensive High Schools:

The Division *mean size* of high school core content and world languages classrooms is 20.62 students per classroom as reported in Table 11 below. Mean class sizes *range* across individual schools from 19.84 at Monticello High School to 21.26 at Albemarle High School. Factors causing variance in mean class sizes across high schools include:

- Building-level decisions to use Full-time Equivalencies (FTEs) to staff programs (e.g., electives), intervention/prevention tutorials, and core content classes beyond division/state minimal requirements based upon the learning needs of students and issues specific to a particular school community.

As with middle schools, the Full-time Equivalencies (FTEs) assigned to high schools for staffing purposes also fund teaching assistants, librarians, electives, PE, guidance, literacy specialists, gifted resource, technology, and intervention staff for each school. Special education staff may support regular classroom teachers through collaborative teaching within core content classrooms as well as provide pull-out self contained or resource support to students outside regular classroom instruction. No high schools qualify for Title I support.

Division Mean Size for High Schools* (Table 11)

<i>School</i>	<i>Mean Size</i>	<i>Number of Classrooms</i>
Albemarle	21.26	350
Monticello	19.84	246
Western Albemarle	20.50	241
Division	20.62	837

Mean size by grade levels is not included for high schools since the focus is on core content and world languages classrooms rather than grade levels. Typically, mean class sizes in core content classrooms vary according to the level of course- practical, standard, advanced, and honors. In high school, differentiation of course levels occurs in all core content areas and world languages with focus on reducing class sizes in levels where students at risk for academic success are typically scheduled. During the 2001-02 School Year, Monticello High School applied for a waiver to pilot an academic level in which advanced and standard level courses were collapsed into one level, called the academic level. This has been continued in subsequent years.

Actual high school class sizes range across the Division from 10 or fewer students in practical level or advanced world languages classes to 34 students in an academic world history class. Changes in practical-level class enrollments occur throughout September as students are assessed and placed in these classes to receive intervention such as provided through the *Language!* program. *As reported in Table 12 in the appendix*, 94.6% of the high school classrooms contain 27 or fewer students and 55.3% of classrooms contain 22 or fewer students. 5.4% or 45 classrooms contain 28-34 students. Of note, school Division trend data show that the Division had 765 core content and world languages classes in 2001, 788 comparable classes in 2002, 814 in 2003, and 837 in 2004.

Longitudinal Frequency Data for Actual High School Class Sizes (Table 13)

<i>Student Numbers in Classrooms</i>	<i>Year</i>	<i>AHS # of classes</i>	<i>MHS # of classes</i>	<i>WAHS # of classes</i>	<i>Total # of classes</i>
20 or fewer	2004	123	125	99	347
	2003	142	94	111	347
	2002	127	84	116	327
	2001	101	110	117	328
21-27	2004	210	95	140	445
	2003	189	113	124	426
	2002	192	111	111	414
	2001	198	103	107	408
Over 27	2004	17	26	2	45
	2003	15	22	4	41
	2002	15	26	6	47
	2001	18	5	6	29

High School Classes with More than 27 Students (Table 14)

<i>Content Area</i>	<i>AHS # of classes (class sizes)</i>	<i>MHS # of classes (class sizes)</i>	<i>WAHS # of classes (class sizes)</i>
Hon. English 9		1 (28)	
Hon. English 10		3 (28, 28, 30)	
Acad. English 11		1 (29)	
Hon. English 11		1 (28)	
AP English 12	2 (28, 29)	1 (28)	
PVCC English 12	2 (28, 32)		
Acad. World Hist. I		4 (29, 29, 31, 34*)	
Acad. World Hist. II		1 (30)	
AP European History			1 (28)
Acad. VA/US History		1 (31)	
AP VA/US History	1 (29)		
AP Govt/Politics	2 (28, 29)		
PVCC Government	1 (30)		
Std. Algebra I		1 (28)	
Adv. Geometry		1 (29)	
Hon. Geometry		1 (28)	
Adv. Coll. Alg./Trig	1 (28)		

Hon. Math Analysis	1 (28)	2 (28, 30)	
Adv. Ecology	3 (29, 29, 30)		
Acad. Earth Science		2 (28, 28)	
Hon. Biology		3 (28, 29, 30)	
Std. Physics	1 (28)		
Adv. Physics	1 (28)		
Hon. Physics	1 (28)	1 (32)	
Adv. German I	1 (28)		
Adv. Spanish III		2 (29, 29)	1 (28)
Total:	17 classes	26 classes	2 classes

* includes four students taking only the first semester of the course

Notes on Specific Schools:

1. The principal at Albemarle High School reports that most of the large enrollments resulted from accommodating the schedules of students participating in upper level “one of a kind” classes that restrict them to certain periods for other courses. In the case of one course, Advanced Ecology, the demand for the course was just larger than anticipated. Some enrollments may drop as students move out of classes; this has already happened in the College Algebra/Trig section cited above. A half-time English teacher has been hired to allow the school to offer additional sections of English 12, with the goal of lowering enrollment in the PVCC English 12 sections. The principal reports that priority continues to be placed on smaller enrollments at the practical level, and notes that once the school’s staffing report has cleared, he will begin to analyze ways to use any additional staffing to address classes that remain at 28 or more students.
2. Monticello had 26 class sections with more than 27 students at the time the data for this report were generated. Many large classes result from small numbers of students in “one of a kind” classes that affect the remainder of their schedule, forcing them into specific course sections that then become large. Another factor affecting class sizes was the registration, between July 15 and September 3, of approximately 115 new students, coupled with the discovery that some 65 students who had pre-registered would not be attending Monticello. The school hired an additional English teacher the same week the numbers for this report were generated, which will allow the creation of one new section of academic English at each grade level. The principal reports that the high enrollments in academic World History I are of concern. However, one world history teacher is trying to develop an elective dealing with African-American culture, and the large enrollment in this teacher’s world history class may feed into this elective and allow it to be offered in subsequent years. In math, most of the high enrollments are due to a limited number of section offerings and the need to accommodate the schedules of individual students. The standard Algebra I class currently at 27 is double-blocked and has collaborative teaching. High enrollments in science are due to an emphasis on keeping enrollments lower at the practical and academic levels. This is done in part to allow students who wish to attempt the honors level the chance to do so, while leaving room in the academic level to accommodate the several students who typically wish to drop down a level at the end of the first quarter.
3. Western Albemarle has only two class sections with more than 27 students, both of which resulted from conflicts with individual students’ schedules. The teachers of both classes are experienced, and because of the level of the courses (AP European History and Advanced Spanish III), the students are highly motivated.

Junior ROTC Program:

During the 2001-02 School Year, a plan to implement a Junior ROTC program at Monticello High School was approved by the Board. In 2002, a total of 38 students enrolled, of whom 22 were males and 16 were females. In 2003, a total of 42 students were enrolled—20 males and 22 females. In 2004, 28 males and 25 females—a total of 53 students—are enrolled across the four years of the program. The target enrollment for the Air Force to sustain the program is 100 students enrolled by the fall of 2005.

Non-European Languages

Three non-European languages are offered at the high school level throughout the division. Monticello offers Chinese, taught on-site, and Japanese, offered through the Virginia Satellite Education Network. At the time the data were generated for this report, there were eight students enrolled in Chinese I or II, one student enrolled in Japanese I, and one student enrolled in Japanese III. Western Albemarle offers Japanese, taught on-site, with 22 students currently enrolled. Albemarle offers Arabic, taught on-site, with seven students enrolled in Arabic I and nine students enrolled in Arabic II.

References:

See Appendix for supplemental information in tables 3, 4, 9 and 12.

Definitions of Educational Terms Used in this Report:

Collaborative Teaching – resource teachers such as gifted or special education teachers may be scheduled by the principal to work with a regular education teacher to co-teach core content instruction. Collaboratively taught classes may be larger because of the ratio of teachers to students.

Cumulative Percent – successive additions of percentages to show numerically the number of classes within a specific range such as the percentage of classes with 22 or fewer students

Differentiated Funding – a local initiative funded by the School Board to provide additional staffing to schools based upon the percentage of students qualified for free and reduced lunch. This funding was instituted because of research regarding the impact of lowering class sizes and provision of intervention /prevention services on the academic progress of students at risk of not demonstrating academic success in school.

Emergency Staffing – a local initiative funded by the School Board to provide central staff with three additional FTEs for use in addressing emergency situations or needs in individual schools

Frequency – number of occurrences of a specific class size

Full-time Equivalency (FTE) – one teacher (1 FTE) or the equivalent number of teaching assistants (1 fulltime TA = .33 FTE). Principals fund part-time teachers, teaching assistants or “buy back” planning periods based upon FTEs.

Language! – a literacy intervention program adopted by the school Division for use in secondary schools. This program is used typically as a resource in practical level language arts instruction. The goal for class size in practical level language arts classrooms is 10 students or less.

Mean Class Size – average class size

Standards of Quality (SOQ) – regulations set by the Commonwealth of Virginia with which school divisions and schools must comply. Receipt of funds allocated to specific state initiatives such as class size reduction is tied to compliance with the regulation.

World Languages – non-English language courses taught in the schools