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2013-14 Arkansas Test Results

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**2013-14 Arkansas
Test Results**

Summary Points

- Average performance on the Arkansas Benchmark exam declined for the second year in a row, with 78% scoring proficient or advanced in literacy and 72% in math. These scores represent a one percentage point drop and three percentage point drop, respectively, from 2012-13.
- Student performance on three out of four End of Course Exams improved from last year (Biology, 11th Grade Literacy, and Geometry). While Algebra EOC proficiency declined, it still has the highest percent proficient or advanced (75%).
- Arkansas's national percentile rank on the Iowa Tests of Basic Skills (ITBS) declined one percentile point in each category (math, language, and reading).
- Full databases with state- and district-level scores are available on the OEP Arkansas Data webpage:
www.officeforeducationpolicy.org/arkansas-schools-data/

In late July, the Arkansas Department of Education (ADE) released the 2013-14 test score results. The following brief highlights the results of these tests, compares achievement scores over time, and provides a glimpse of regional achievement results for the following exams:

- **Benchmark Exam (Grades 3-8)**
- **End-of-Course Exam (Algebra I, Geometry, Biology, and Grade 11 Literacy).**
- **Iowa Test of Basic Skills (Grades 1-9)**

Academic Snapshots

Benchmark Performance: Statewide

The Arkansas Benchmark exams in math and literacy were administered for the last time in the 2013-14 school year before the Common Core-aligned PARCC test will begin in the spring of 2015. The criterion-referenced Benchmark has been administered to students in grades 3-8

each spring in Arkansas since the 2001-02 school year and measures knowledge proficiency according to the Arkansas curricular standards.

Scores on the Benchmark exam declined in 2013-14 from previous years; 78% of Arkansas' 3rd-8th grade students scored at the proficient or advanced level (P/A) in literacy as compared to 79% in 2012-13, and 72% scored P/A in math as compared to 75% in the previous year (Figure 1). This drop, a continuation of the previous year's decline, comes after a steady increase in performance from the 2005-06 administration to the 2011-12 administration. Although we cannot identify the cause of the decline, we have a few potential hypotheses for the drop in scores over the past two years. The first could be a potential

Figure 1: Percent Proficient And Advanced on the Benchmark Exam, 2004-2014

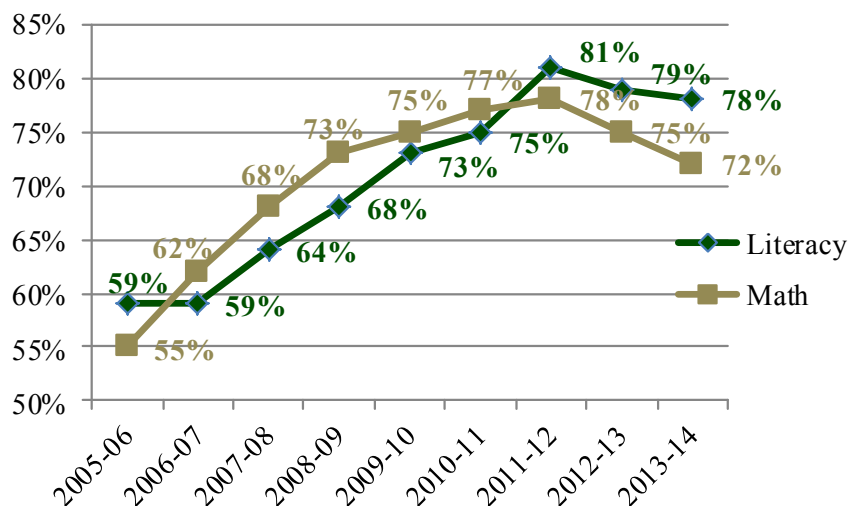


Table 1: Student Demographic Characteristics, 2013-14 by Region

	Enrollment	% Minority	% FRL
Arkansas Overall	474,995	37%	61%
Region 1: Northwest	166,016	30%	58%
Region 2: Northeast	95,402	28%	67%
Region 3: Central	141,068	44%	56%
Region 4: Southwest	46,436	44%	68%
Region 5: Southeast	26,073	52%	73%

Figure 2: Literacy Benchmark Exam, Percent Proficient and Advanced, by Region 2012-13 and 2013-14

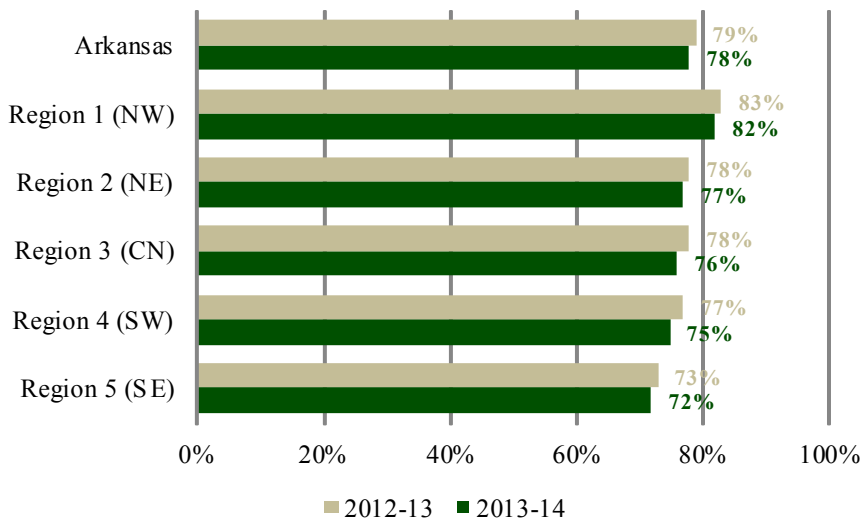
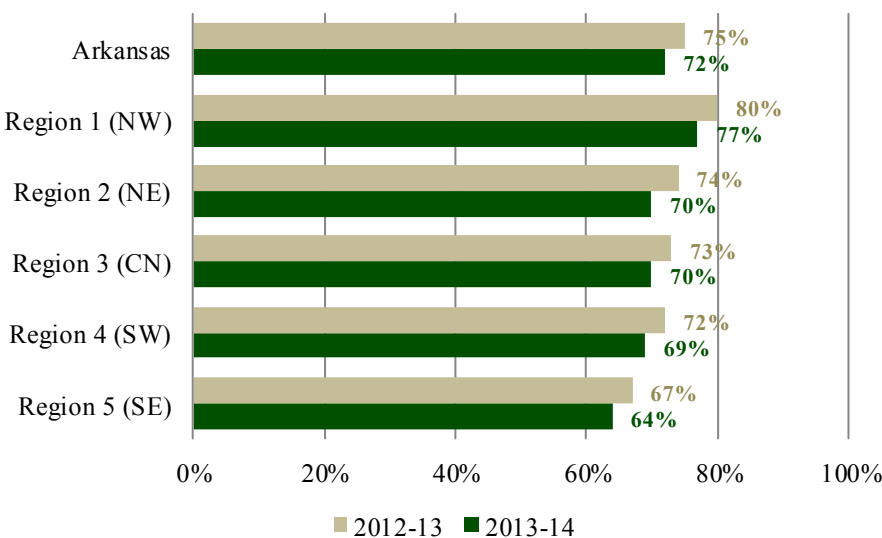


Figure 3: Math Benchmark Exam, Percent Proficient and Advanced, by Region 2012-13 and 2013-14



ceiling effect; as scores approach the score ceiling (100%), it becomes increasingly difficult to obtain gains. Another potential reason for the decline is that students were being taught based on Common Core State Standards but were tested on the Arkansas Curriculum Frameworks. Finally, 75 school districts missed 10 or more school days due to snow days during the 2013-14 school year and requested waivers to shorten the required 178 days of instruction.

Benchmark Performance: Regional

In this section, we examine student performance on the Benchmark exam by region. The ADE divides schools and districts into the following five regional categories:

- **Region 1:** Northwest (NW)
- **Region 2:** Northeast (NE)
- **Region 3:** Central (CN)
- **Region 4:** Southwest (SW)
- **Region 5:** Southeast (SE)

Demographic characteristics about each region can be found in Table 1. The highest concentration of students is found in the Northwest and Central regions. Further, we see the lowest levels of poverty among these two regions, as measured by the percentage of students receiving a free or reduced-priced lunch (FRL). Conversely, we see the lowest enrollment and highest concentration of FRL students in the Southwest and Southeast regions.

As can be seen in Figures 2 and 3, this past year, all regions had negative returns in literacy, while only one region had gains in math scores (Northwest increased by 3 percentage points).



Benchmark Performance: By Grade

Grade-level summaries of Benchmark exam performance are presented in Table 2 below. In math and science, a higher proportion of students score at the proficient or advanced levels in the lower grades than in the higher grades. For example, 84% of third graders were proficient or advanced in math as compared to 64% of eighth graders. A pattern is less clear for literacy.

Given the region's relative affluence, it is not surprising that Northwest Arkansas has the highest percent of students scoring proficient or advanced in literacy and math across the state. However, it is important to note that the Southeast has seen the largest gains in students scoring at the proficient or advanced levels on both the math and literacy Benchmark exams (gains of at least 22 percentage points in both subjects) since the 2005-06 administration.

In fact, despite two years of declines, all regions are still at least 15 percentage points above the 2005-06 level in both subjects.

End-of-Course Exam Performance: Statewide

Students in Arkansas taking courses in Algebra, Geometry, Biology are required to take an End-of-Course (EOC) exam at the end of the year, and all 11th grade students are required to take a Literacy EOC exam. The following section highlights Arkansas performance on these EOC exams.

The only decline in scores from the previous year was on the **Algebra EOC** (a 2 percentage point decline). The greatest gain in EOC performance was on the **Biology EOC** (up three percentage points to 47% percent scoring P/A from the prior year). Student performance on the **11th Grade Literacy EOC** grew by 2 percentage points over the prior year to 72% P/A (see Figure 4).

While student performance on the **Geometry EOC** grew 2 percentage points over the prior year to 74% P/A, this only made up part of the previous year's 3 percentage point decline.

Table 2: Grade-Level Performance on the Arkansas Benchmark Exam, 2013-14

Grade	Math Total		Literacy Total		Science Total	
	# Tested	% Prof./Adv.	# Tested	% Prof./Adv.	# Tested	% Prof./Adv.
3	35,403	84%	35,403	77%		
4	35,497	76%	35,497	83%		
5	35,262	68%	35,262	82%	35,261	57%
6	35,657	73%	35,657	69%		
7	35,898	69%	35,898	77%	35,898	37%
8	35,620	64%	35,620	77%		

Figure 4: EOC Exams, Percent Scoring Proficient or Advanced, 2007-08 to 2013-14

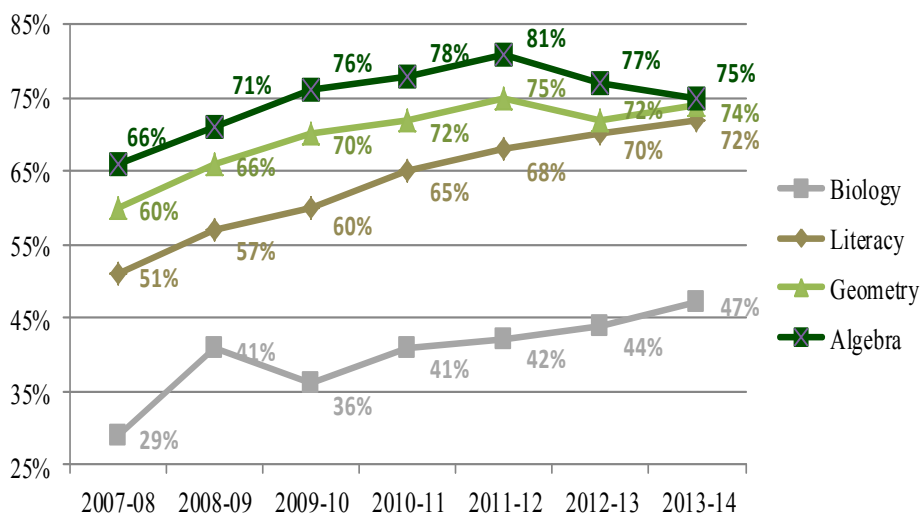


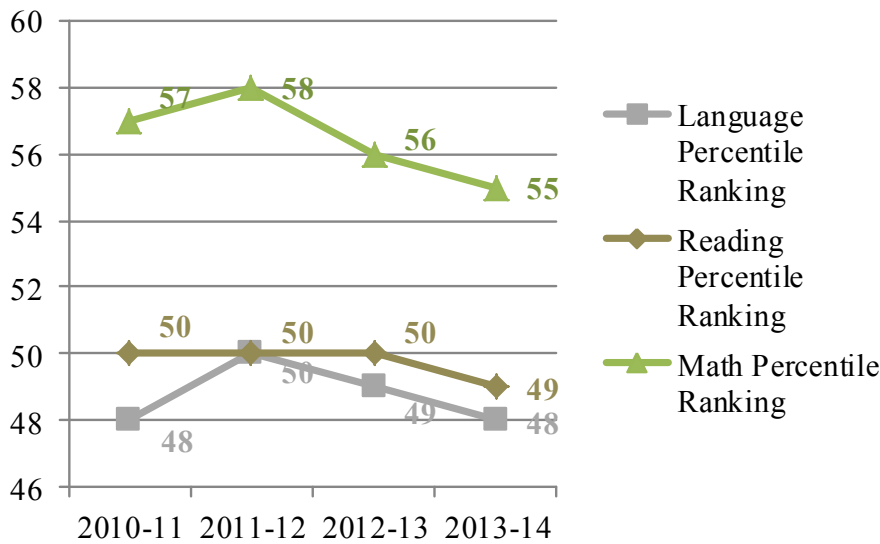
Table 3: EOC Exams, Percent Scoring Proficient or Advanced, by Region, 2013-14

	Algebra	Geometry	Grade 11 Literacy	Biology
Arkansas	75%	74%	72%	47%
Region 1 (NW)	80%	80%	78%	57%
Region 2 (NE)	74%	71%	68%	41%
Region 3 (CN)	74%	72%	71%	46%
Region 4 (SW)	66%	68%	66%	36%
Region 5 (SE)	68%	65%	64%	29%

End-of-Course Exam Performance: Regional

As seen in Table 3 above, regional trends in EOC performance mirror that of Benchmark Exams, with the highest percentage of students scoring P/A concentrated in Northwest Arkansas. In general, the Algebra EOC exam had more students scoring at the P/A level followed by Geometry, then by Grade 11 Literacy and finally by Biology (see Table 3 above, with the exception of the Southwest region, where Geometry outperformed Algebra). This was similar to the trend seen in 2012-13. This may be because the Biology EOC exam is the "newest" of the EOC exams, and teachers and students are still acclimating to the test.

Figure 5: National Percentile Rank on the Iowa Test of Basic Skills on Grades 3-8, 2010-11 through 2013-14¹



Note: The science portion of the exam was not administered in 2012-13, so the science test results are not included here.

Table 4: National Percentile Rank on the Iowa Test of Basic Skills, 2013-14, by Region

	Mathematics NPR	Reading NPR	Language NPR
Arkansas	55	49	48
Region 1 (NW)	59	54	51
Region 2 (NE)	52	47	47
Region 3 (CN)	54	48	47
Region 4 (SW)	52	46	46
Region 5 (SE)	47	40	42

Iowa Test of Basic Skills Performance: Regional

Not surprisingly, the trend of performance on statewide exams being the highest in Northwest Arkansas (Region 1) does not change with ITBS performance. In fact, Northwest Arkansas is the only region in the state with higher percentile ranks than the state average. On the math section, every region except the Southeast scored at or above an NPR of 52, meaning these regions scored higher than or equal to 52% of the nation.

Compared to ITBS results from last year, the gap between the highest-performing region and the lowest-performing region has remained steady in math (12 points) and reading (14 points) but decreased in language (from 11 points to 9 points). While the improvement in the regional gap on the language portion is promising, the achievement differences between regions is a continued area of concern for the Arkansas education system.

Iowa Test of Basic Skills Performance: Statewide

The Iowa Test of Basic Skills (ITBS) is a nationally norm-referenced test (NRT) that is administered as part of the “Augmented Benchmark exam.” In 2013-14, the ITBS was administered to students in grades 1-9 (only grades 3-8 are used in the Augmented Benchmark, so we are only including these scores).

Arkansas students first took the ITBS during the 2004-05 school year and then again during 2010-14. During the years the ITBS was not administered, Arkansas used the SAT-10 as the NRT portion of the Augmented Benchmark Exam. Since the ITBS is a nationally normed test, results are reported in National Percentile Ranks (NPR). This measures Arkansas’ student performance against that of other states that administer the ITBS. For example, an NPR of 55 in math means that the average Arkansas student performed better than or equivalent to 55% of ITBS test takers on the math portion.

As shown in Figure 5, 2013-14 scores decreased in each subject area. Arkansas currently ranks in the top half of the distribution in math (NPR=55) but in the bottom half in language (NPR=48) and reading (NPR=49). On the **math** exam, there was growth in the NPR between 2010-11 and 2011-12, but there has been a decline since then, ending up a point lower than Arkansas’ original 2010-11 NPR. In **reading**, Arkansas’ NPR declined one percentile point this year to 49, after remaining steady at an NPR of 50 for the three previous years. In **language**, like math, there was a year of growth from 2010-11 to 2011-12 and then declines over the last two years, so that Arkansas’ 2013-14 NPR returned to its 2010-11 level.

For More Information about this Policy Brief and other education issues in Arkansas contact us:

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Summary

This year's administration of standardized tests showed mixed results for Arkansas students, with falling scores on the Benchmark exam and the Algebra EOC, gains on all other EOC exams, and lower or stagnating scores on the ITBS exam.

There are questions to be asked in the coming months concerning these scores. For example:

- How do these test trends fair across different subgroups of students, such as TAGG and Free or Reduced Lunch students?
- Why do we not see similar performance among middle grades on the math and science Benchmark exam as we do in early grades?

For more detail on school- and district-level results, see the links listed below in the "Sources" section.

In 2014-15 Arkansas will make the transition to the PARCC test. In the first year of implementation, we will not be able to make *direct* comparisons to previous years. On the other hand, we will arguably have better comparisons to the other states using PARCC and will still be able to compare between regions and subgroups. In future years, we will once again be able to measure year-to-year growth.

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Sources:

All of the tables and figures presented above were created using original source data provided by the Arkansas Department of Education Testing Website found here:

<http://www.arkansased.org/divisions/learning-services/student-assessment/test-scores/>

At the OEP, we have taken these raw grade-by-grade data and aggregated them into school- and district-level databases that allow the user to look at performance of the entire school, the entire district, by educational region, and statewide. Click on the following links to access these data by exam and aggregation level:

School- and District-level Benchmark Exam Databases:

www.officeforeducationpolicy.org/arkansas-schools-data

School- and District-level EOC Exam Databases:

www.officeforeducationpolicy.org/arkansas-schools-data

School- and District-level Norm-referenced (ITBS) Databases:

<http://www.officeforeducationpolicy.org/arkansas-schools-data-norm-referenced/>

Databases from the most recent administration (2013-14) were posted in conjunction with this policy brief; however, the websites above included databases spanning back to the 2004-05 academic year.