



# Benchmarking Study

The CHCCS Greenhouse Project

March 24, 2012

# U.S. student scores are about average compared to these countries

## Reading

OCED* Countries	
Korea, Republic of	539
<b>Finland</b>	536
<b>Canada</b>	524
New Zealand	521
Japan	520
Australia	515
Netherlands	508
Belgium	506
Norway	503
Estonia	501
Switzerland	501
Poland	500
Iceland	500
<b>United States</b>	<b>500</b>
Sweden	497
Germany	497
Ireland	496
France	496
Denmark	495
United Kingdom	494
Hungary	494
<b>OCED Average</b>	<b>493</b>
Portugal	489
Italy	486
Slovenia	483
Greece	483
Spain	481
Czech Republic	478
Slovak Republic	477
Isreal	474
Luxembourg	472
Austria	470
Turkey	464
Chile	449
Mexico	425

## Mathematics

OCED* Countries	
Korea, Republic of	546
<b>Finland</b>	541
Switzerland	534
Japan	529
<b>Canada</b>	527
Netherlands	526
New Zealand	519
Belgium	515
Australia	514
Germany	513
Estonia	512
Iceland	507
Denmark	503
Slovenia	501
Norway	498
France	497
Slovak Republic	497
<b>OCED Average</b>	<b>496</b>
Austria	496
Poland	495
Sweden	494
Czech Republic	493
United Kingdom	492
Hungary	490
Luxembourg	489
Ireland	487
Portugal	487
<b>United States</b>	<b>487</b>
Italy	483
Spain	483
Greece	466
Isreal	447
Turkey	445
Chile	421
Mexico	419

## Science

OCED* Countries	
<b>Finland</b>	554
Japan	539
Korea, Republic of	538
New Zealand	532
<b>Canada</b>	529
Estonia	528
Australia	527
Netherlands	522
Germany	520
Switzerland	517
United Kingdom	514
Slovenia	512
Ireland	508
Poland	508
Belgium	507
Hungary	503
<b>United States</b>	<b>502</b>
<b>OCED Average</b>	<b>501</b>
Czech Republic	500
Norway	500
Denmark	499
France	498
Iceland	496
Sweden	495
Austria	494
Portugal	493
Slovak Republic	490
Italy	489
Spain	488
Luxembourg	484
Greece	470
Isreal	455
Turkey	454
Chile	447
Mexico	416

### Notes:

**Students in Finland attend 190 days of school for 4-7 hours a day.**

**Students in Canada attend 187 days of school for 4.75 to 5.15 hours of instruction a day.**

### Key:

- Average higher than U.S.
- Average not different than U.S.
- Average lower than U.S.

\*OCED = Organisation for Economic Co-operation & Development

Source: <http://nces.ed.gov/pubs2011/2011004.pdf> (Highlights from PISA 2009: Performance of 15-Year-Old Students)

# North Carolina student scores are average in reading & above average in math; 4<sup>th</sup> graders did better than 8<sup>th</sup> graders when compared to other states

## 4th Grade Reading

Jurisdiction	Average
Massachusetts	236.8
New Jersey	231.2
Maryland	230.8
New Hampshire	230.4
Connecticut	227.4
Pennsylvania	227.2
Vermont	226.8
Virginia	226.4
North Dakota	225.6
Montana	225.1
Kentucky	225.1
Delaware	225.1
Florida	224.5
Wyoming	224.1
Ohio	223.8
Kansas	223.6
Colorado	223.4
Nebraska	223.3
New York	222.5
Rhode Island	222.5
Minnesota	222.3
Maine	222.0
<b>North Carolina</b>	<b>221.4</b>
Wisconsin	221.2
Idaho	220.8
Georgia	220.8
Indiana	220.7
Iowa	220.7
Washington	220.5
Utah	220.4
Missouri	220.3
Alabama	220.3
<b>Nation</b>	<b>220.0</b>
South Dakota	219.8
Illinois	219.4
Michigan	218.9
Texas	218.3
Arkansas	216.5
Oregon	216.4
Oklahoma	215.5
South Carolina	214.9
Tennessee	214.6
West Virginia	214.4
Hawaii	213.6
Nevada	212.6
Arizona	212.4
California	211.4
Louisiana	210.4
Mississippi	209.2
New Mexico	208.0
Alaska	207.9

## 8th Grade Reading

Jurisdiction	Average
Massachusetts	275.4
New Jersey	275.2
Connecticut	274.7
Vermont	273.8
Montana	272.9
New Hampshire	272.1
Maryland	271.2
Colorado	270.6
Minnesota	270.1
Maine	269.9
Wyoming	269.6
South Dakota	268.9
Kentucky	268.8
North Dakota	268.7
Ohio	268.3
Idaho	268.0
Pennsylvania	267.8
Nebraska	267.7
Washington	267.6
Kansas	267.3
Virginia	267.3
Wisconsin	267.2
Utah	267.1
Missouri	266.8
Delaware	265.8
<b>New York</b>	<b>265.7</b>
Illinois	265.6
Michigan	265.2
Rhode Island	265.1
Indiana	264.7
Iowa	264.6
Oregon	264.2
<b>Nation</b>	<b>263.6</b>
<b>North Carolina</b>	<b>262.9</b>
Georgia	262.4
Florida	262.1
Texas	261.4
Alaska	261.3
South Carolina	260.3
Arizona	260.1
Oklahoma	260.1
Tennessee	259.2
Arkansas	259.1
Alabama	258.4
Nevada	258.2
Hawaii	257.2
West Virginia	256.1
New Mexico	255.9
California	254.9
Louisiana	254.7
Mississippi	253.8

## 4th Grade Math

Jurisdiction	Average
Massachusetts	253.4
New Hampshire	251.8
Minnesota	249.2
New Jersey	248.0
Maryland	247.1
Vermont	246.6
Kansas	246.3
Pennsylvania	245.7
Virginia	245.3
North Dakota	245.2
Wisconsin	244.7
<b>North Carolina</b>	<b>244.5</b>
Colorado	244.5
Maine	244.3
Ohio	244.0
Wyoming	243.9
Indiana	243.8
Montana	243.8
Washington	243.2
Iowa	242.6
Utah	242.5
Connecticut	242.4
Rhode Island	241.6
Texas	241.1
South Dakota	241.0
Kentucky	240.8
Missouri	240.5
Delaware	240.4
Idaho	240.3
<b>Nation</b>	<b>240.1</b>
Florida	239.8
Nebraska	239.8
Illinois	238.8
Hawaii	238.8
Georgia	238.4
Arkansas	237.8
New York	237.5
Oklahoma	237.4
South Carolina	237.3
Nevada	237.0
Oregon	236.9
Michigan	236.4
Alaska	236.4
Arizona	235.2
West Virginia	234.7
California	234.2
Tennessee	232.9
New Mexico	232.8
Alabama	231.3
Louisiana	230.8
Mississippi	229.9

## 8th Grade Math

Jurisdiction	Average
Massachusetts	298.5
Minnesota	294.9
New Jersey	294.1
Vermont	293.9
Montana	292.9
New Hampshire	292.1
North Dakota	292.0
Colorado	291.7
South Dakota	290.6
Texas	290.3
Kansas	289.6
Virginia	289.3
Maine	288.7
Wisconsin	288.7
Ohio	288.6
Washington	288.1
Maryland	288.0
Wyoming	287.8
Connecticut	287.0
Idaho	286.7
<b>North Carolina</b>	<b>286.3</b>
Pennsylvania	286.1
Indiana	285.0
Iowa	284.9
Utah	283.3
Alaska	283.3
Illinois	283.2
Nebraska	283.2
Rhode Island	282.9
Delaware	282.8
<b>Nation</b>	<b>282.7</b>
Oregon	282.5
Missouri	281.9
Kentucky	281.6
South Carolina	281.0
New York	280.5
Michigan	280.2
Oklahoma	279.2
Arkansas	279.1
Arizona	279.0
Georgia	278.5
Nevada	278.1
Florida	277.8
Hawaii	277.8
New Mexico	274.5
Tennessee	274.0
West Virginia	273.3
Louisiana	272.8
California	272.8
Mississippi	269.2
Alabama	269.1

**Note: The test was the National Assessment of Educational Progress (NAEP)**

### Key:

Average higher than N.C.

Average not different than N.C.

Average lower than N.C.

### Sources:

<http://www.dpi.state.nc.us/accountability/policies/naep/2> &  
<http://nces.ed.gov/nationsreportcard/satecomparisons/>

**The District led\*  
the State on  
average math EOG  
scores for 7 of 8  
NCLB\*\* groups**

**(Blue = Not  
Statistically Different)**

**For the 8<sup>th</sup> group,  
Economically  
Disadvantaged  
Students, the district  
ranked 46<sup>th</sup>**

<b>All Students</b>		
District (N = 116)	Average	Rank
<b>Chapel Hill-Carrboro</b>	<b>363.3</b>	<b>1</b>
Polk County	360.1	2
Union County	360.0	3
Mooresville City	359.8	4
Watauga County	359.8	4

<b>Students with Disabilities</b>		
District (N = 105)	Average	Rank
<b>Chapel Hill-Carrboro</b>	<b>356.0</b>	<b>1</b>
Watauga County	354.4	2
Mount Airy City	354.1	3
Dare County	354.0	4
Polk County	353.9	5

<b>Limited English Proficient Students</b>		
District (N = 69)	Average	Rank
<b>Chapel Hill-Carrboro</b>	<b>353.4</b>	<b>1</b>
Burke County	352.6	2
Beaufort County	351.7	3
Sampson County	351.7	4
Wilson County	351.6	5

<b>African American Students</b>		
District (N = 91)	Average	Rank
Mooresville City	355.1	1
Union County	355.0	2
Jones County	354.9	3
Lincoln County	354.7	4
Scotland County	354.5	5
Camden County	354.3	6
Burke County	354.2	7
<b>Chapel Hill-Carrboro</b>	<b>354.1</b>	<b>8</b>

<b>Asian Students</b>		
District (N = 22)	Average	Rank
<b>Chapel Hill-Carrboro</b>	<b>366.4</b>	<b>1</b>
Pitt County	365.7	2
Wake County	365.6	3
Union County	364.4	4
New Hanover County	364.0	5

<b>Latino Students</b>		
District (N = 83)	Average	Rank
<b>Chapel Hill-Carrboro</b>	<b>356.7</b>	<b>5</b>
Ashe County	358.0	1
Stokes County	357.6	2
Polk County	357.1	3
Burke County	357.1	3

<b>White Students</b>		
District (N = 113)	Average	Rank
<b>Chapel Hill-Carrboro</b>	<b>365.6</b>	<b>1</b>
Charlotte-Mecklenberg	362.2	2
Wake County	362.1	3
Asheville City	361.9	4
Union County	361.7	5

<b>Economically Disadvantaged Students</b>		
District (N = 115)	Average	Rank
Yancy County	357.9	1
Polk County	357.8	2
Surry County	357.1	3
Ashe County	356.9	4
Burke County	356.8	5
Mooresville County	356.5	6
Watauga County	355.9	7
Haywood County	355.8	8
Dare County	355.8	8
Alleghany Count	355.7	10
Camden County	355.6	11
Elkin City	355.6	11
Henderson County	355.6	11
Lincoln County	355.6	11
Jones County	355.6	11
Mitchell County	355.5	16
Avery County	355.5	16
Caldwell County	355.4	18
Mount Airy City	355.4	18
Currituck County	355.3	20
Davie County	355.3	20
Scotland County	355.3	20
Union County	355.3	20
Wilkes County	355.3	20
Newton Conover City	355.2	25
Transylvania County	355.1	26
Alexander County	355.1	26
Stokes County	355.1	26
McDowell County	355.1	26
Carteret County	355.1	26
Catawba County	355.1	26
Lee County	355.1	26
Swain County	355.1	26
Cherokee County	354.9	34
Cleveland County	354.9	34
Davidson County	354.8	36
Graham County	354.8	36
Buncombe County	354.7	37
Whiteville City	354.6	38
Sampson County	354.6	38
Brunswick County	354.6	38
Asheville City	354.6	38
Wilson County	354.4	42
Rutherford County	354.4	42
Yadkin County	354.3	44
Macon County	354.3	44
<b>Chapel Hill-Carrboro</b>	<b>354.2</b>	<b>46</b>

**Notes: 1) Analysis limited to districts with at least 100 students in the group. 2) This pattern holds for reading, as well.**

**\*\*“Led” means having the highest average, or being no different than the highest average on a statistical test.**

**\*\*NCLB = the Federal No Child Left Behind accountability program**

Source: <http://accrpt.ncpublicschools.org/app/2011/disag/>  
“Downloadable Datasets”

\*33 Districts score statistically higher than CHC

Even though CHCCS did very well for 7 of 8 NCLB groups compared to other districts, the 8 groups have very different average EOG math scores

\*The average for Asian Students and White Students was about the same.

\*\*The average for African American Students and Economically Disadvantaged Students was about the same.

### Chapel Hill-Carrboro Students (Gr. 3-8 Combined)

5th Grade Percentile	Achievement Level	NCLB Group	Average Score
99th	Level IV		373
			372
			371
			370
			369
			368
			367
90th	Level IV	Asian Students* White Students*	366
			365
			364
83rd	Level IV	All Students	363
80th	Level III		362
			361
			360
			359
			358
63rd	Level III	Latino Students	357
59th	Level III	Students with Disabilities	356
			355
50th	Level III	African American Students** Economically Disadvantaged Students**	354
			353
			352
38th	Level III		351
34th	Level II		350
			349
			348
			347
			346
			345
			344
			343
			342
9th	Level II		341
8th	Level I		340

**District improvement for 4 groups was between 1.7 times and 3.5 times faster than state-wide improvement over a three year period**



NC 2 Year Change	CHCCS 2 Year Change	CHCCS Rate Change v. NC
'08-09 – '10-11	'08-09 – '10-11	'08-09 – '10-11
2.1	7.4	<b>3.5 x</b>
4.9	10.8	<b>2.2 x</b>
5.5	10.4	<b>1.9 x</b>
5.0	8.6	<b>1.7 x</b>
3.1	2.2	<b>0.7 x</b>
2.3	0.2	<b>0.1 x</b>
1.7	<b>-1.2</b>	<b>-0.7 x</b>
<b>-0.2</b>	<b>-1.5</b>	<b>-7.5 x</b>

**In 2011, District proficiency was 10 or more percentage points above the State level for 7 of 8 NCLB groups**



NCLB Group	NC % Proficient	CHCCS % Proficient	CHCCS % Proficient vs NC
	2011	2011	2011
<b>Students with Disabilities</b>	34.4	56.6	<b>+22.2</b>
<b>African American Students</b>	48.5	58.5	<b>+10.0</b>
<b>Latino Students</b>	54.4	65.2	<b>+10.8</b>
<b>Economically Disadvantaged</b>	53.3	56.4	<b>+3.1</b>
<b>All Students</b>	67.0	85.6	<b>+18.6</b>
<b>White Students</b>	79.0	> 95.0	<b>+16.0</b>
<b>Asian Students</b>	78.2	88.4	<b>+10.2</b>
<b>Limited English Proficient</b>	34.4	50.2	<b>+15.8</b>

**Note: Measure is Percent Proficient on Both Reading & Math End-of-Grade Tests, 3<sup>rd</sup> – 8<sup>th</sup> Grades Combined.**

Source: <http://accrpt.ncpublicschools.org/app/2011/disag/>



## High School Ranking Study 2010 (Data from 2007-08)

- Three measures
  - 1. Poverty Adjusted Performance
  - 2. Disadvantaged Student Performance Gap
  - 3. College Readiness
- Measure Definitions
  - #1 & 2 both used State tests -- NCLB measures
    - In NC, these were Algebra I, English I & 10<sup>th</sup> Grade Writing
  - #3 used number of Advanced Placement (AP) tests taken and proportion of passing scores
- Four awards:
  - Gold Medal
  - Silver Medal
  - Bronze Medal
  - Honorable Mention
- To be considered for a Gold or Silver Medal, schools had to meet criteria on measures #1 & 2 (State test measures)



## Chapel Hill High & East Chapel Hill High School Received Honorable Mentions

- Neither high school met the criterion for #1, Poverty Adjusted Performance
- Chapel Hill High, but not East, met the criterion for #2, Disadvantaged Students Performance Gap
- 41 high schools in NC met both the #1 & 2 State test criteria
- Both Chapel Hill High and East had high values on the College Readiness (AP) Measure
  - EAST 23<sup>rd</sup> highest value in the study
  - CHHS 25<sup>th</sup> highest value in the study
  - They had the 2 highest values in NC
- Other Observations
  - 100 schools earned Gold Medals overall, though only 22 of the 100 were open enrollment neighborhood schools rather than magnet or charter schools.
  - None of the 22 Gold Medal open enrollment neighborhood schools had diverse student bodies, ie: their students were nearly all White and not Economically Disadvantaged.

Notes: 1) Comparison limited to open enrollment schools, not including charters nor magnets.

2) The data is from 2007-08; Carrboro High opened that year without graduating seniors so they had no data.





**Notes/Observations/Questions:**