



This work is by Dongchan Lee, licensed under a [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License](https://creativecommons.org/licenses/by-nc-nd/4.0/).

Global math education stagnations in the developed countries series



& how to overcome them by empowering the math poorest half of the student population, starting with the MMU1 (Mini Mini USL1)

By Dongchan Lee

Part 2: MMU1 pilot studies with the states
of the USA (January 31st, 2017)

Youtube video version of this is at <https://www.youtube.com/watch?v=qiZW2GnNLXQ>

Updates can be found from www.uslgoglobal.com

MMU1 (Mini Mini USL1) proposals to the cities 2017-2020 (2-4 years)

www.uslgoglobal.com

With Dongchan Lee

Ending Math Poverty

25%

25%

25%

25%

Very quickly

The Best math 50% (with the school teachers)

as appetizers

~ 1.35 STDEV advances

The Worst math 50% with Dongchan Lee

Follow the Yellow Arrows that indicate the expected MMU1 impacts.

To see is to believe: Follow the 15 year trajectories by NAEP's math National Report Card

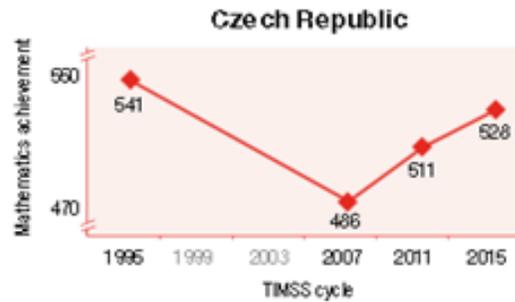
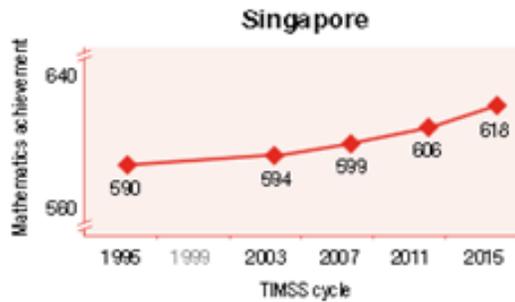
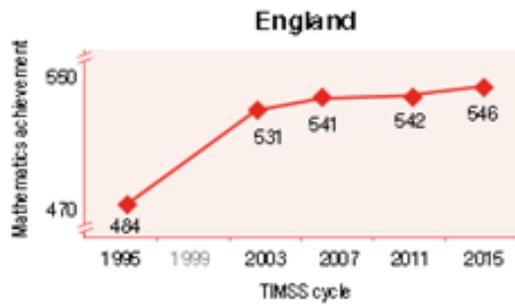
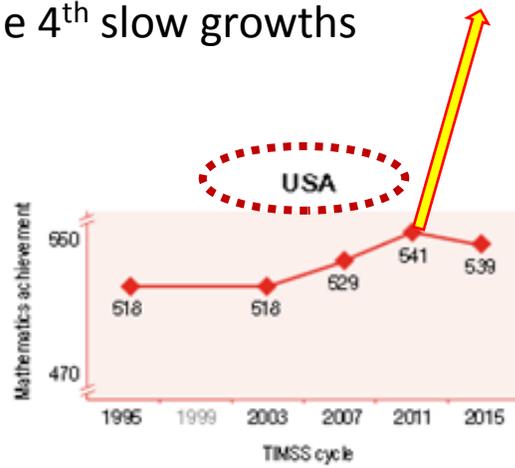
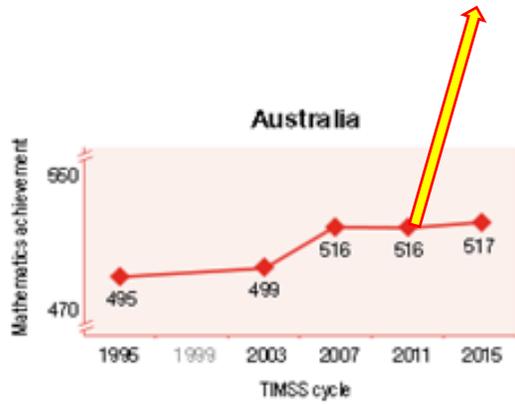
To ignore this is not only the economic ignorance of a nation, but also to betray the future generations of all around you.

Key points:

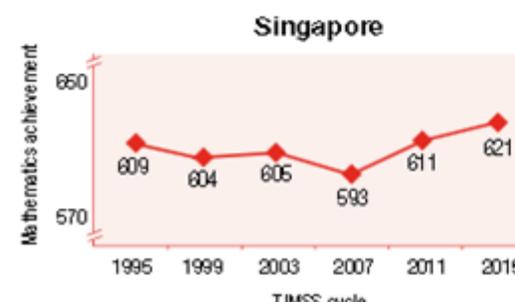
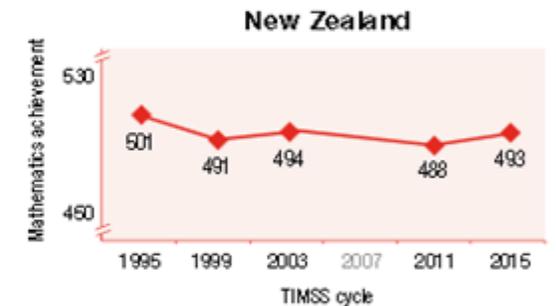
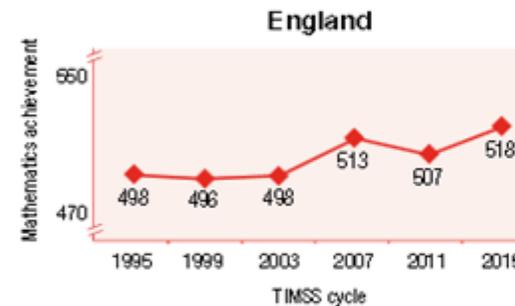
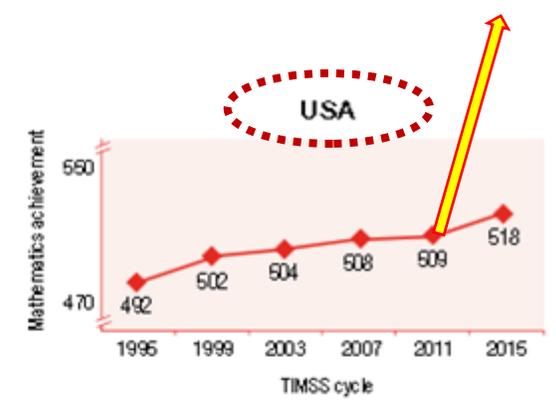
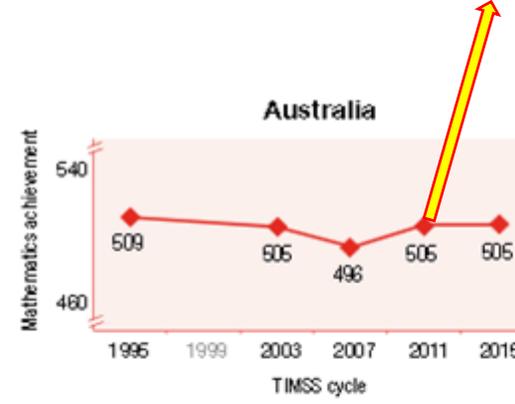
- 1) Most of the states of the USA have shown the indications that their state math average have reached the saturation points of growths similar to the results from the math results of the PISA and TIMSS between 2011 and 2015.
- 2) For the math poor states, still there are more space of the growths, but most of the participating cities seem to have quasi-saturated for the math average growths.

Quasi-horizontal TIMSS math growths past 20 years and what MMU1 is equivalent to do if implemented (Yellow Arrows)

TIMSS Math grade 4th slow growths

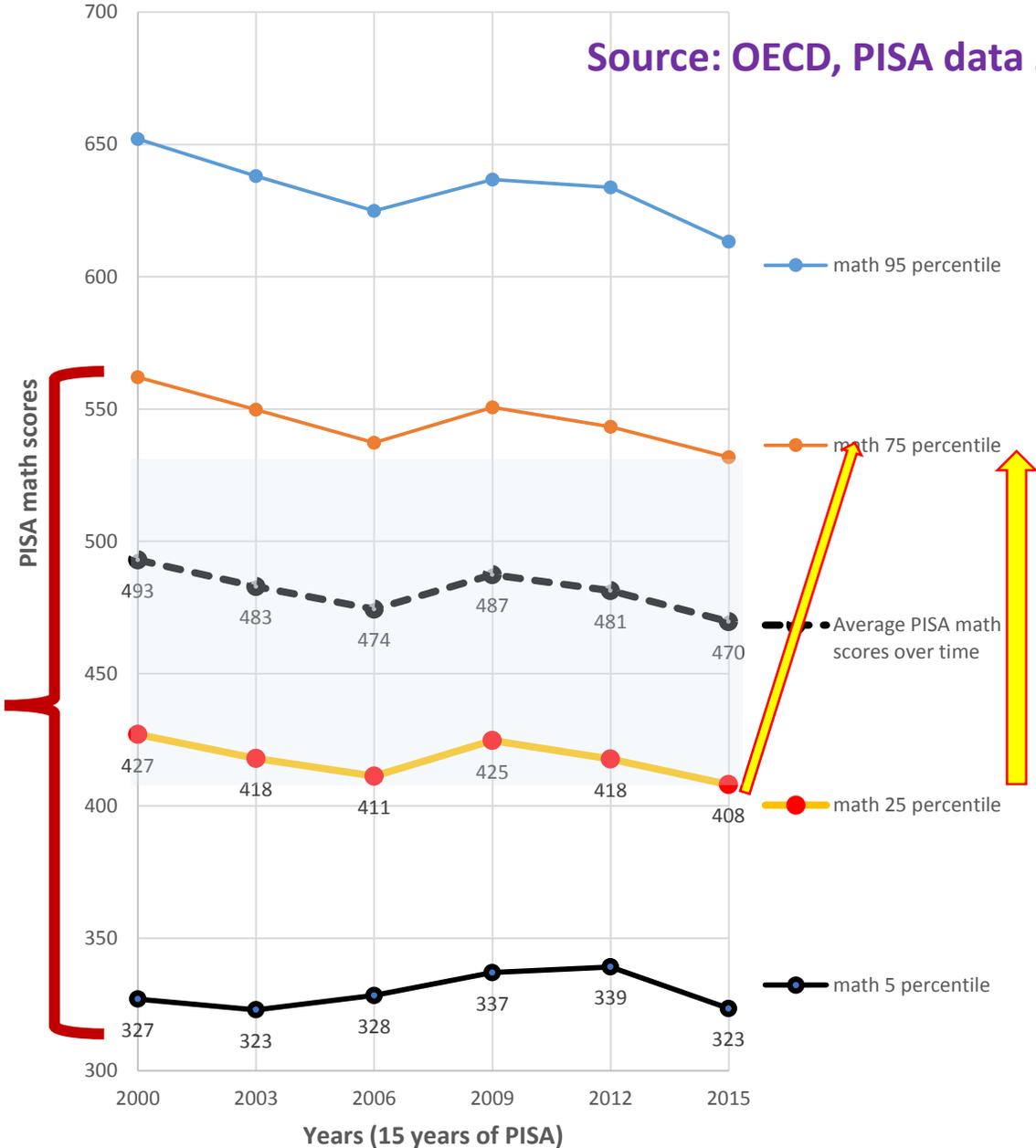


TIMSS Math grade 8th slow growths

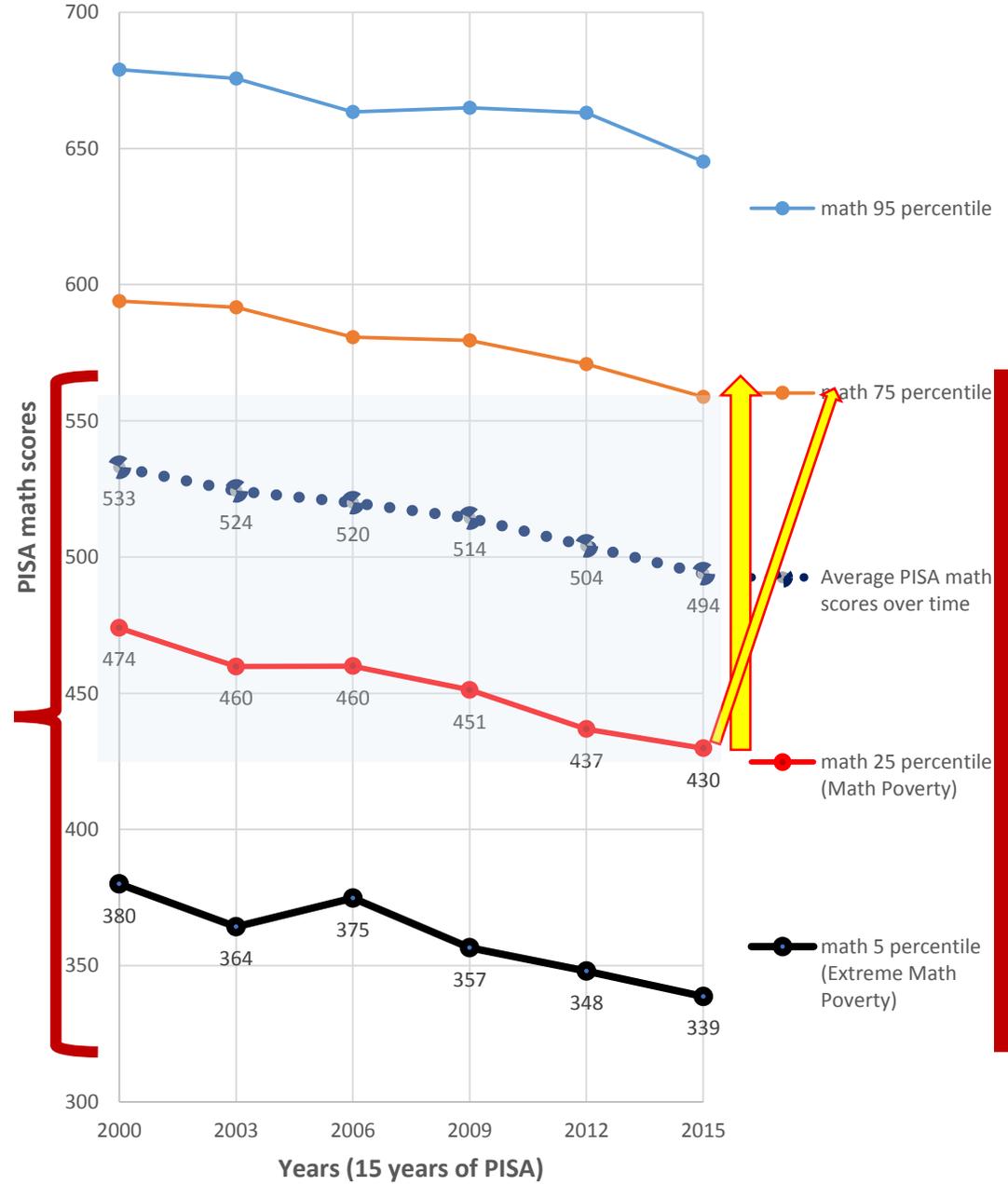


United States: PISA math trajectories: Math poverty levels & percentile distributions 2000-2015 (entire history)

Source: OECD, PISA data 2017



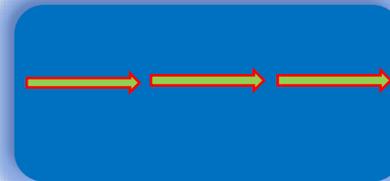
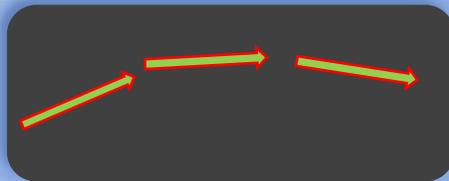
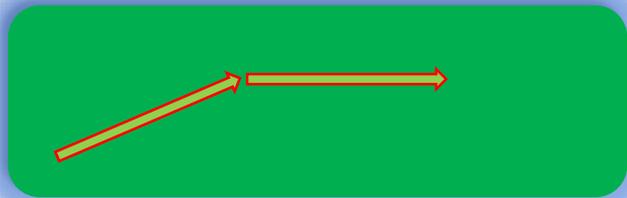
AUSTRALIA: PISA math trajectories: Math poverty levels & percentile distributions 2000-2015 (entire history)



The red arrow is the math chasm between the top math countries and poorest math countries in the entire PISA and TIMSS tests



**MMU1 (Mini Mini USL1) proposals to the states 2017-2020 (2-4 years)
To the 3 categories of math growth states in the USA
Based on NAEP (National Report cards) data 2003-2015**



- Hawaii
- California
- Utah
- New Mexico
- Texas
- Oklahoma
- Missouri
- Arkansas
- Tennessee
- Louisiana
- Mississippi
- Georgia
- Florida
- West Virginia
- Virginia
- North Carolina

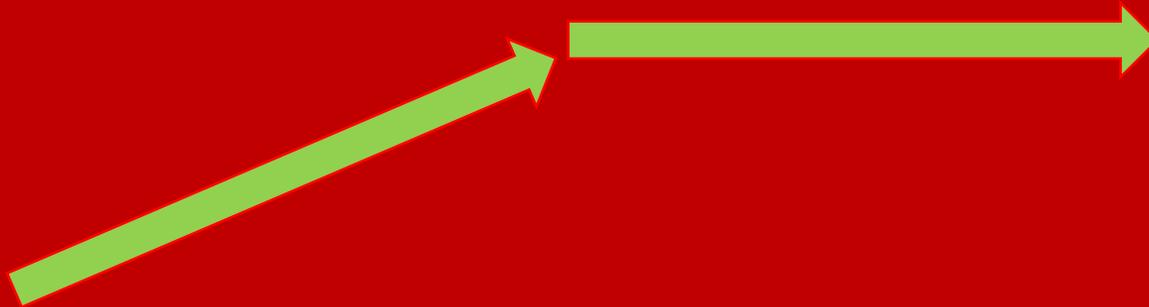
- Massachusetts
- New Hampshire
- Vermont
- Maine
- Rhode Island
- Wisconsin
- Michigan
- Indiana
- Illinois
- Ohio
- Oregon
- Idaho

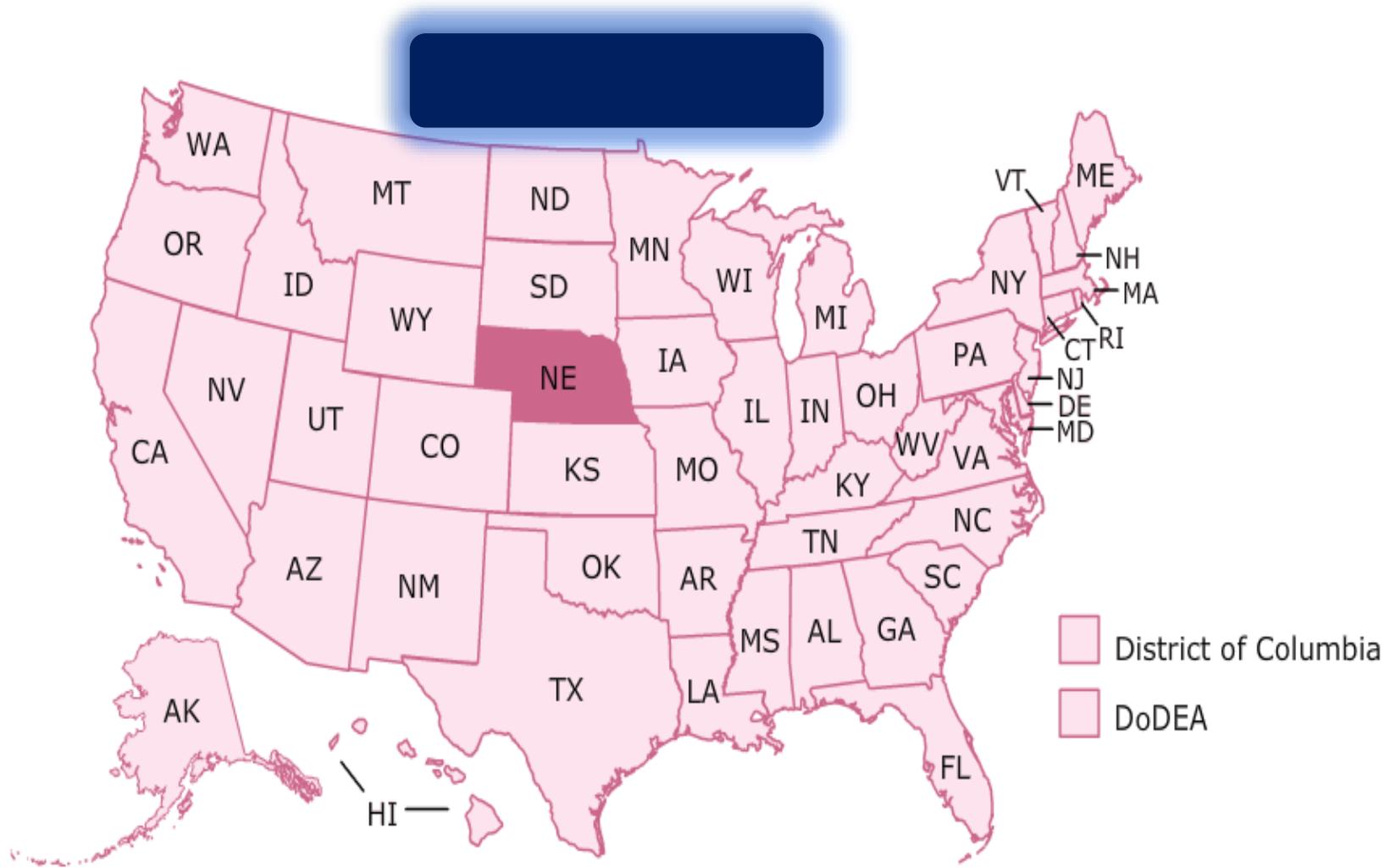
- Colorado
- Kansas
- South Carolina
- Pennsylvania
- NY
- Maryland
- Delaware
- New Jersey
- Connecticut

- Alaska

Source:
<https://nces.ed.gov/nationsreportcard/states/>

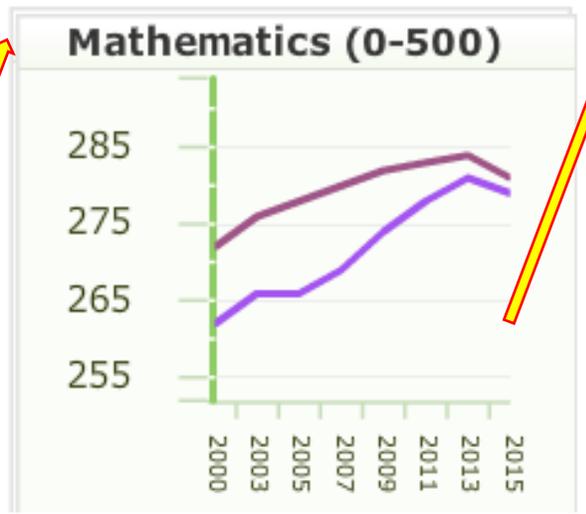
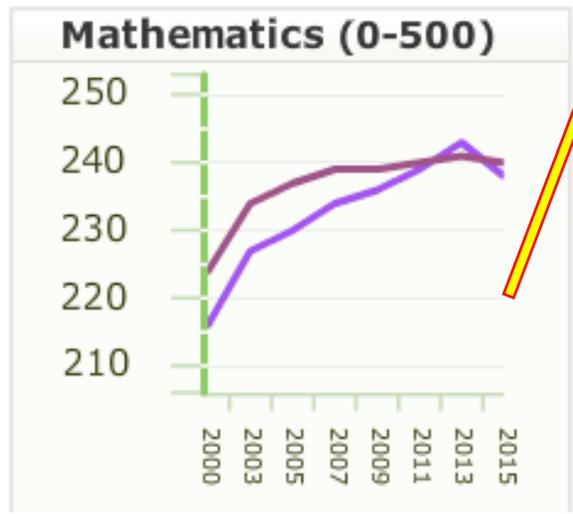
**For those grew much initially, but about to saturate or
have been saturating...**





Outside the main land

Average Scale Score over time for Hawaii

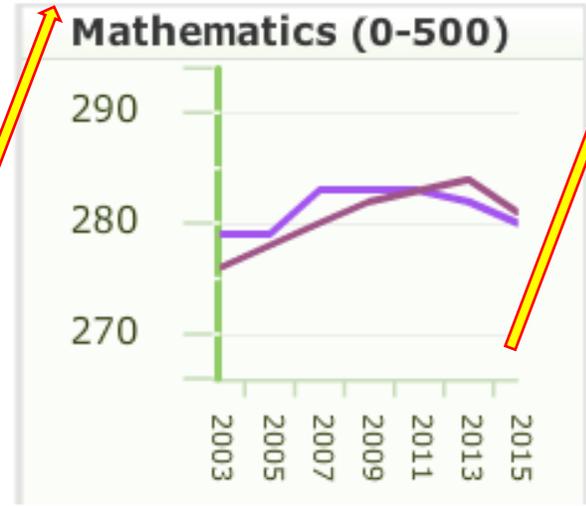
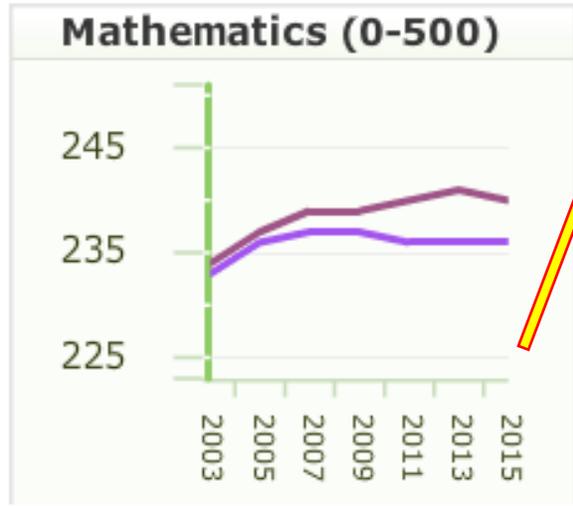


■ National public ■ Hawaii

Grade 4

Grade 8

Average Scale Score over time for Alaska



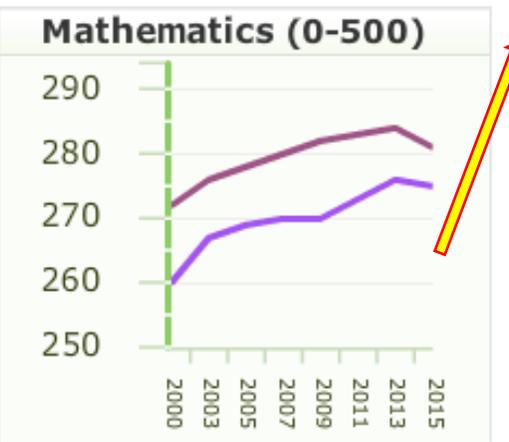
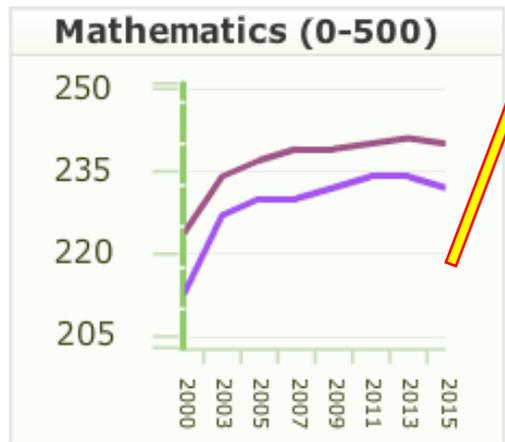
■ National public ■ Alaska

Grade 4

Grade 8

Mid-West to West

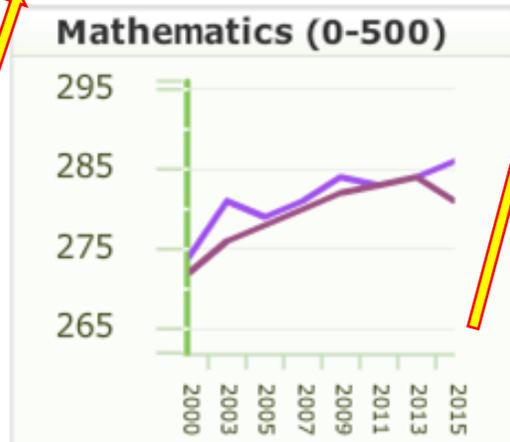
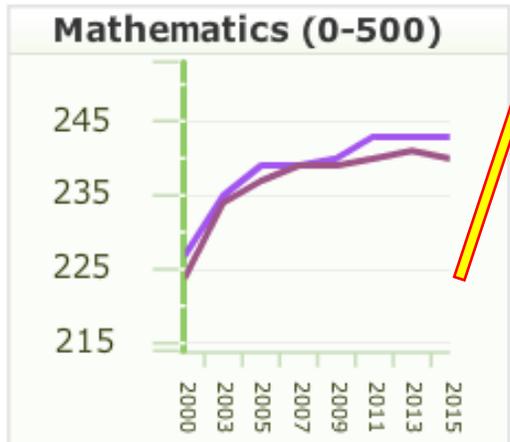
Average Scale Score over time for California



National public California

Grade 4 Grade 8

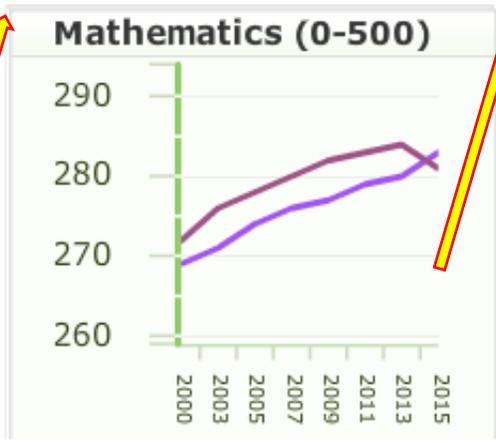
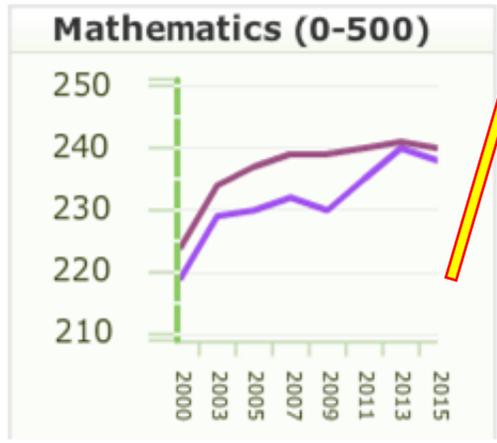
Average Scale Score over time for Utah



National public Utah

Grade 4 Grade 8

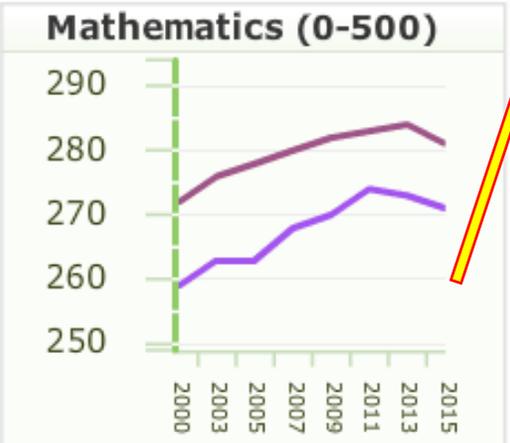
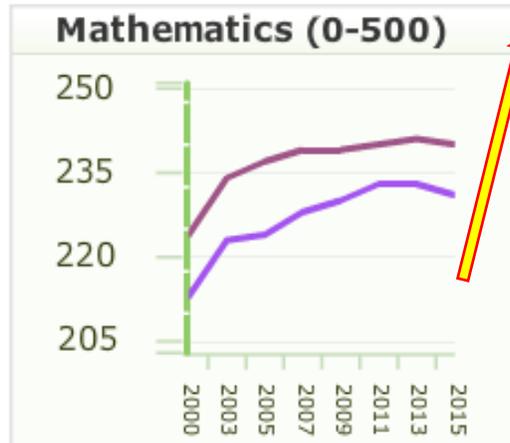
Average Scale Score over time for Arizona



National public Arizona

Grade 4 Grade 8

Average Scale Score over time for New Mexico

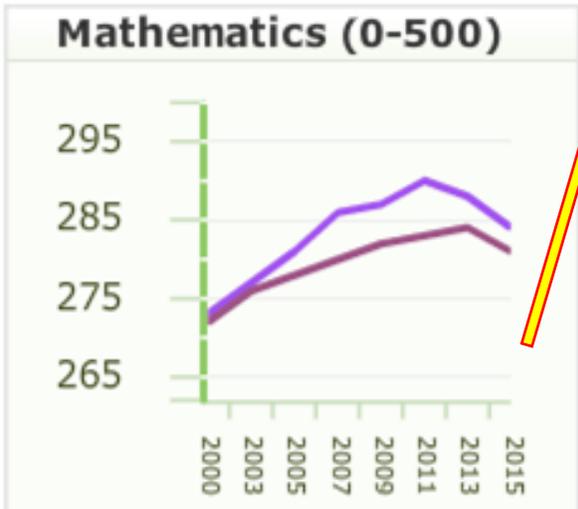
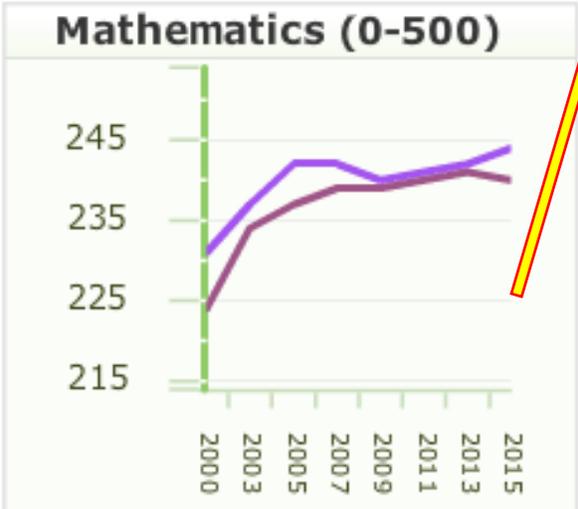


National public New Mexico

Grade 4 Grade 8

Mid central South-East

Average Scale Score over time for Texas

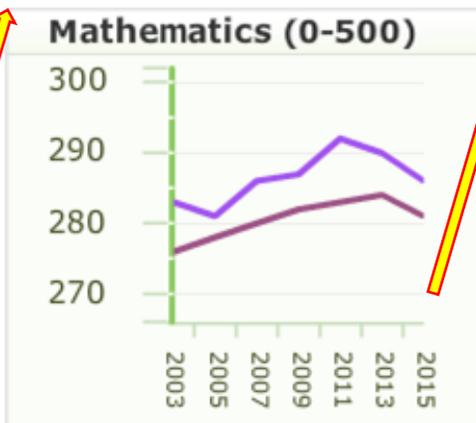
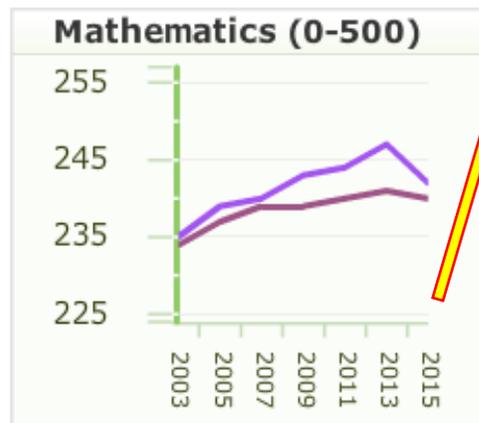


■ National public ■ Texas

Grade 4

Grade 8

Average Scale Score over time for Colorado

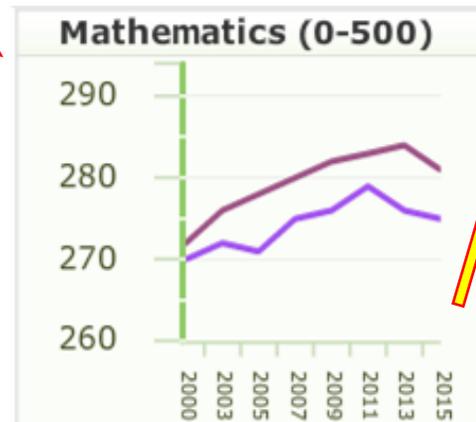
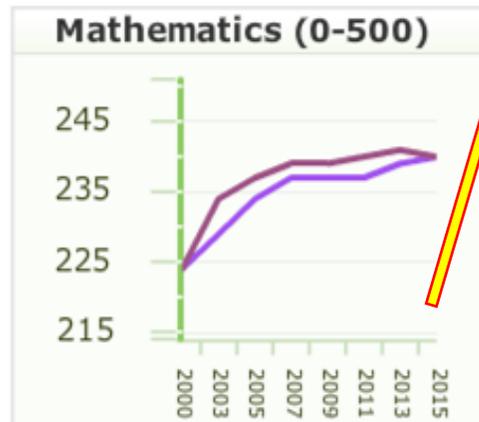


National public Colorado

Grade 4

Grade 8

Average Scale Score over time for Oklahoma

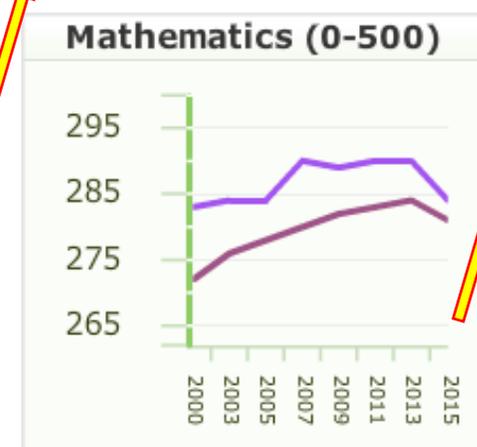
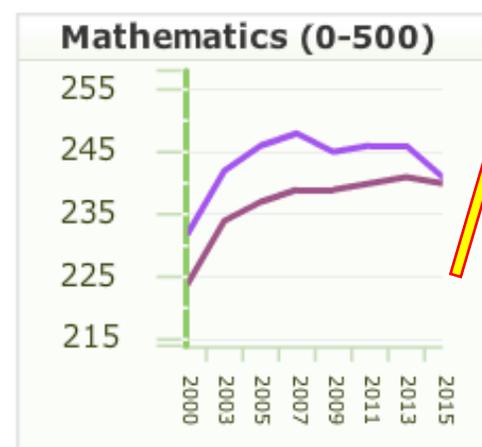


National public Oklahoma

Grade 4

Grade 8

Average Scale Score over time for Kansas

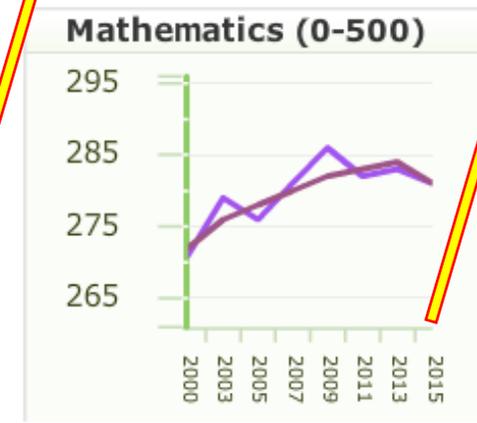
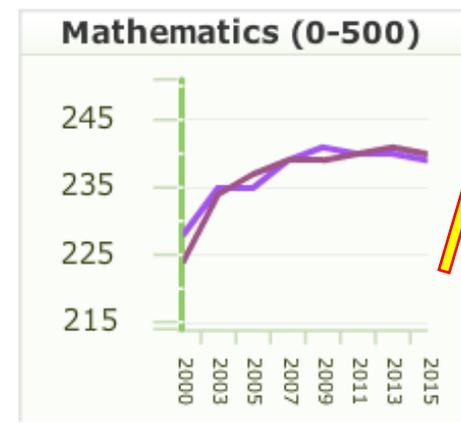


National public Kansas

Grade 4

Grade 8

Average Scale Score over time for Missouri

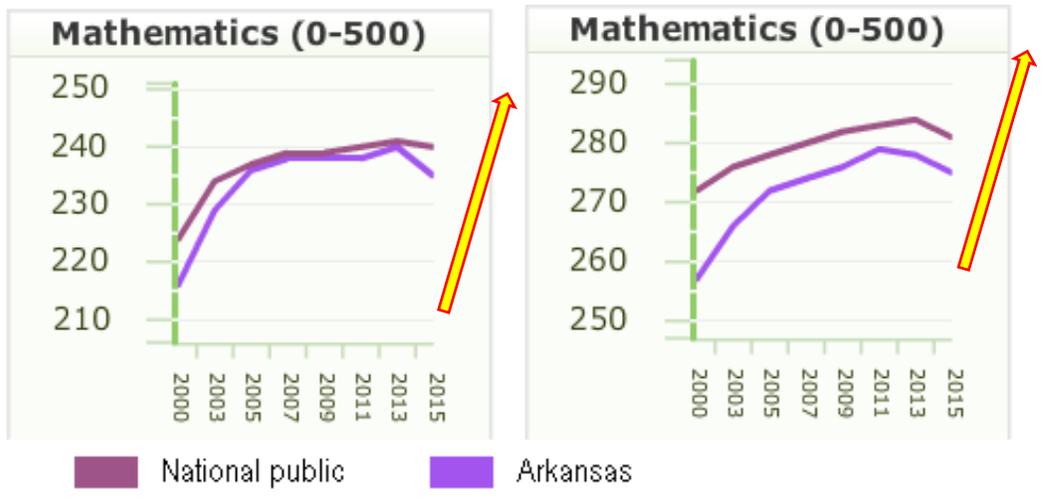


National public Missouri

Grade 4

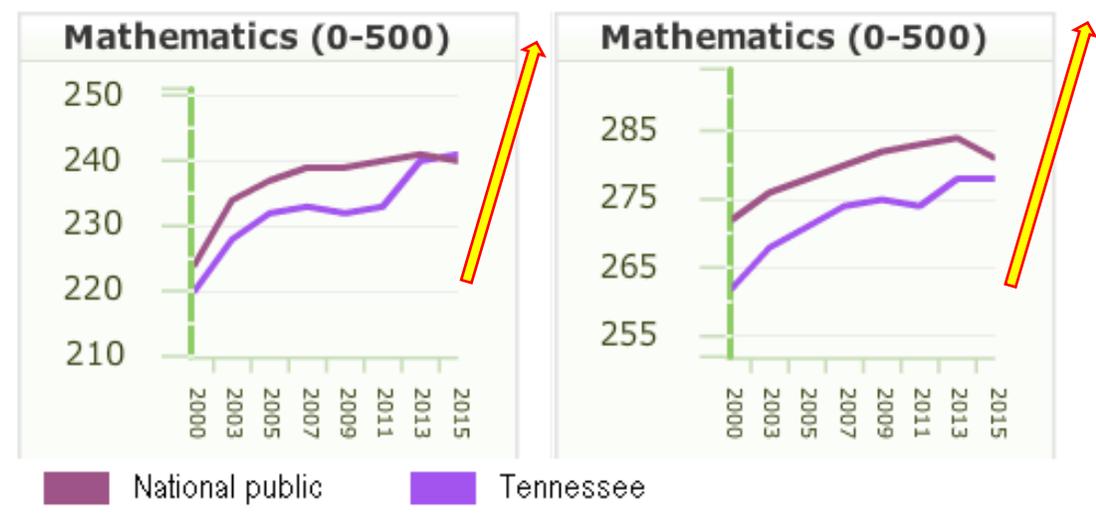
Grade 8

Average Scale Score over time for Arkansas



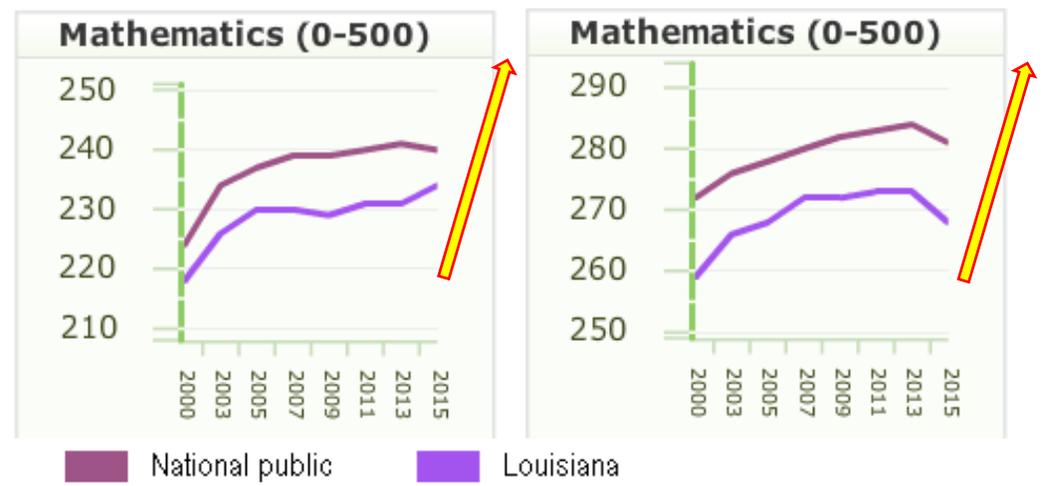
Grade 4 Grade 8

Average Scale Score over time for Tennessee



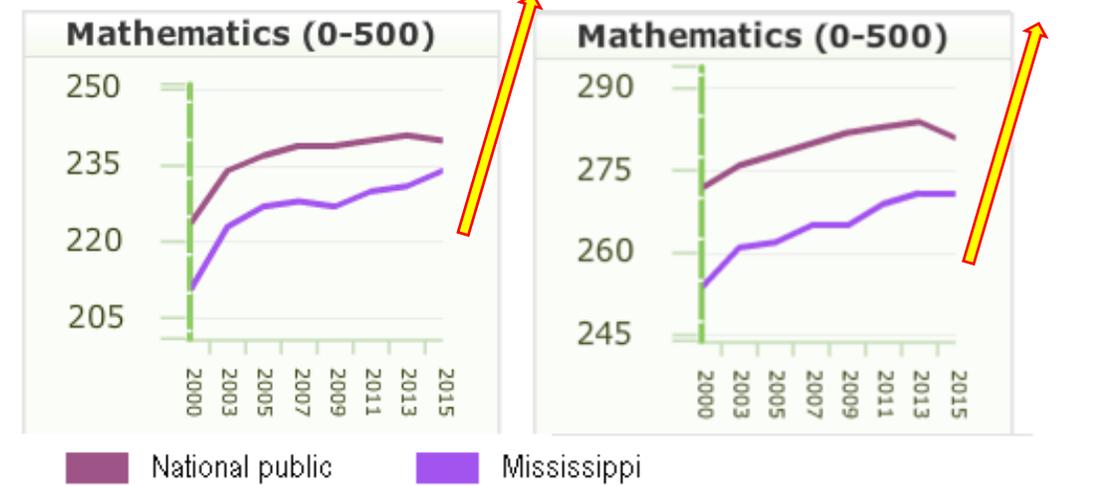
Grade 4 Grade 8

Average Scale Score over time for Louisiana



Grade 4 Grade 8

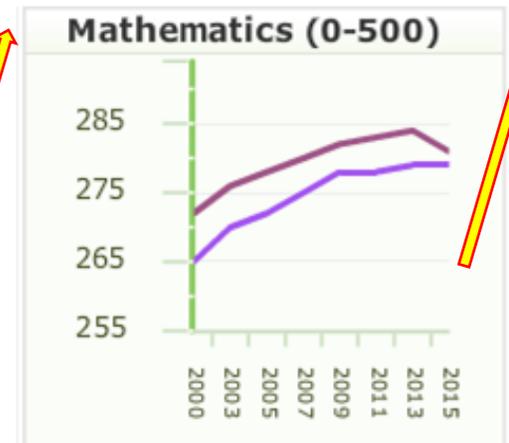
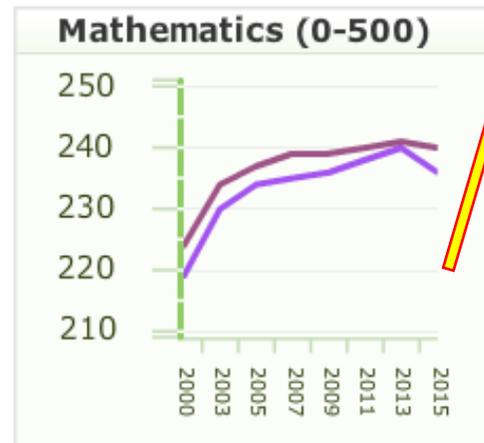
Average Scale Score over time for Mississippi



Grade 4 Grade 8

South-East to East

Average Scale Score over time for Georgia

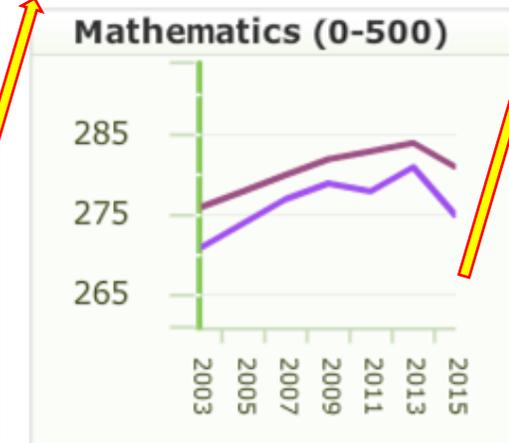
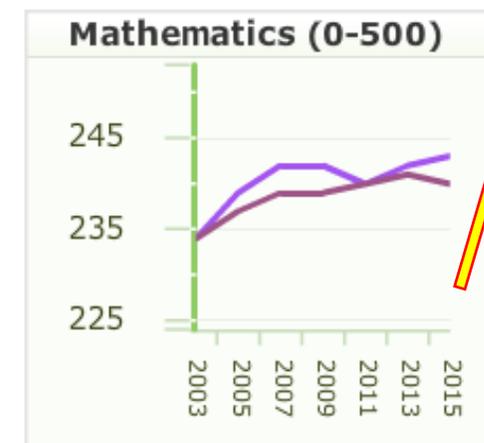


■ National public ■ Georgia

Grade 4

Grade 8

Average Scale Score over time for Florida

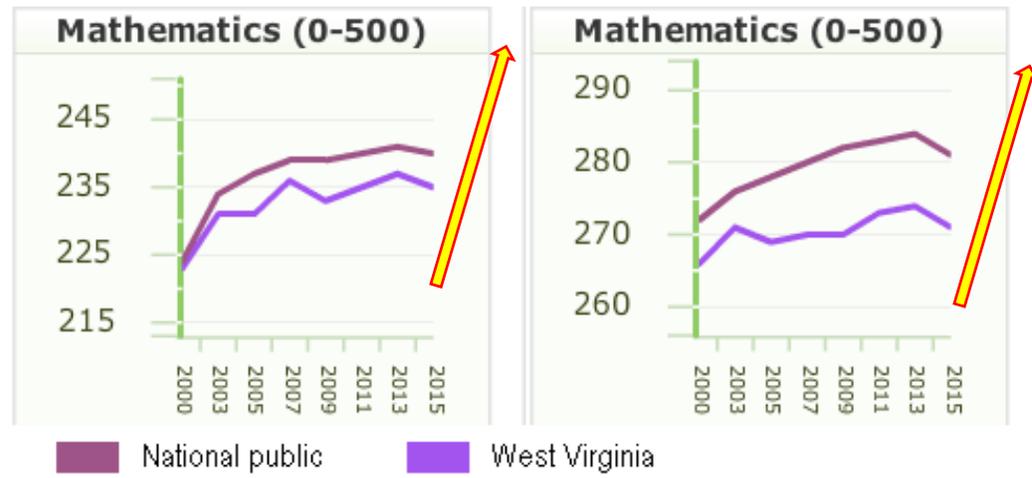


■ National public ■ Florida

Grade 4

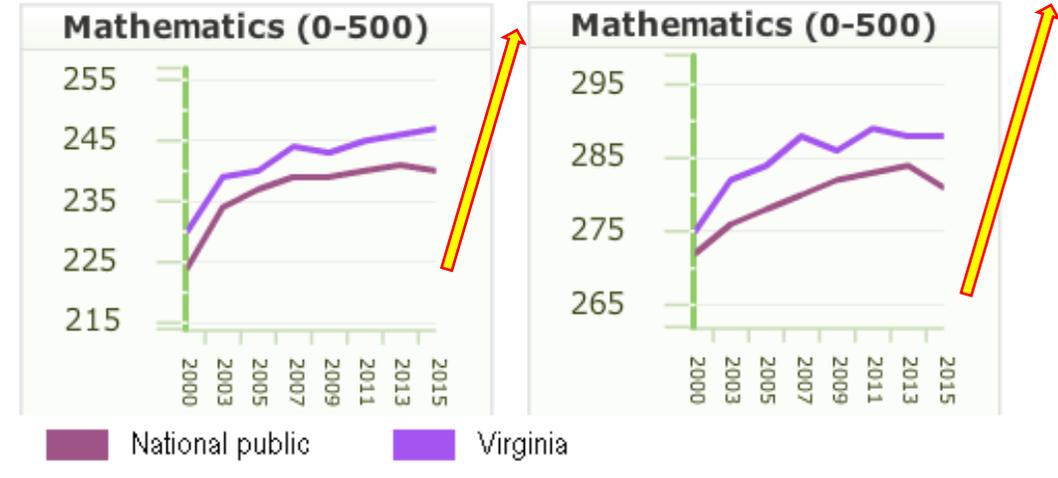
Grade 8

Average Scale Score over time for West Virginia



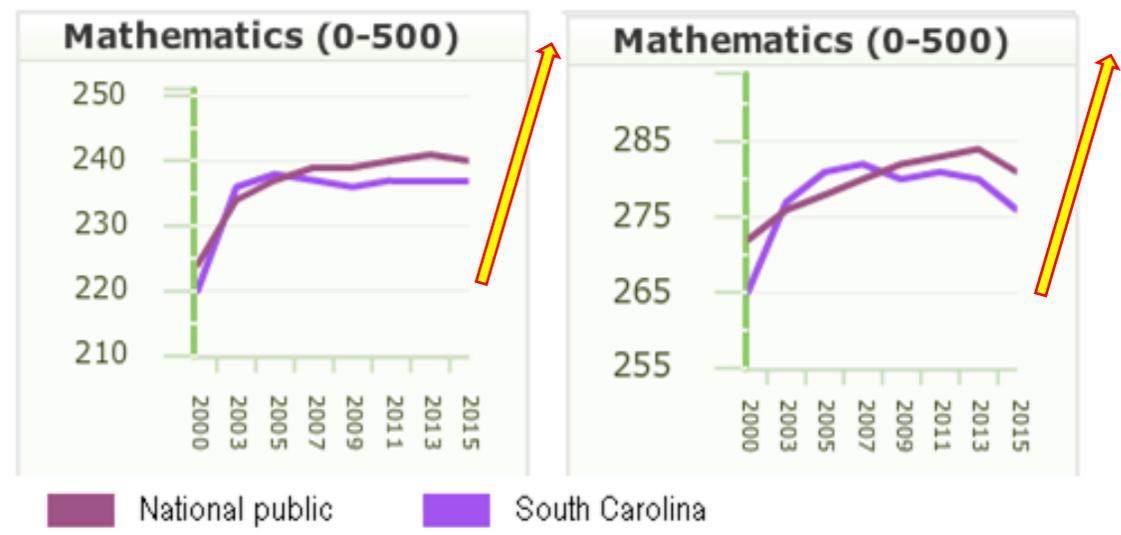
Grade 4 Grade 8

Average Scale Score over time for Virginia



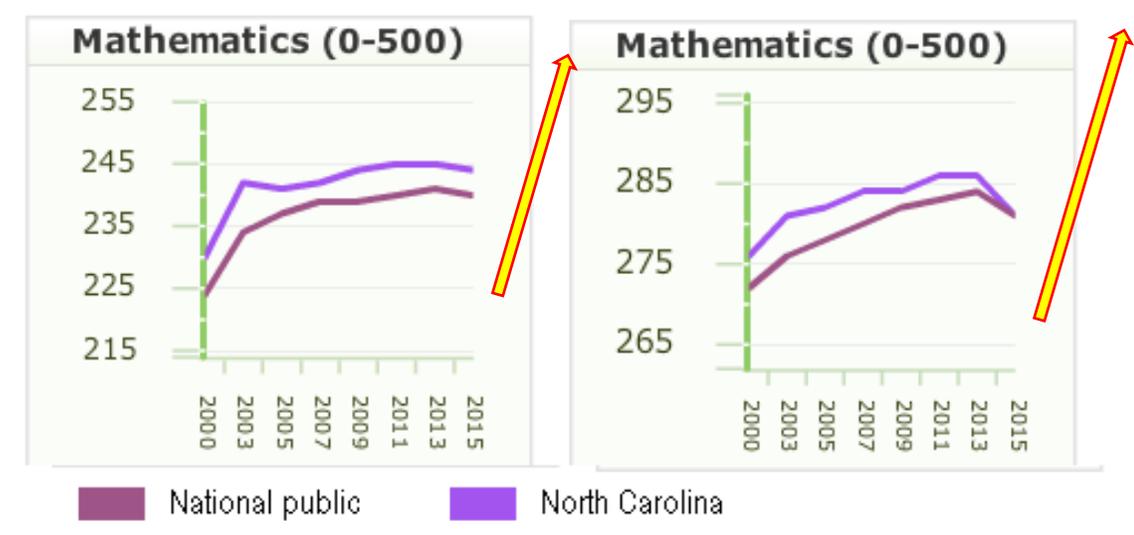
Grade 4 Grade 8

Average Scale Score over time for South Carolina



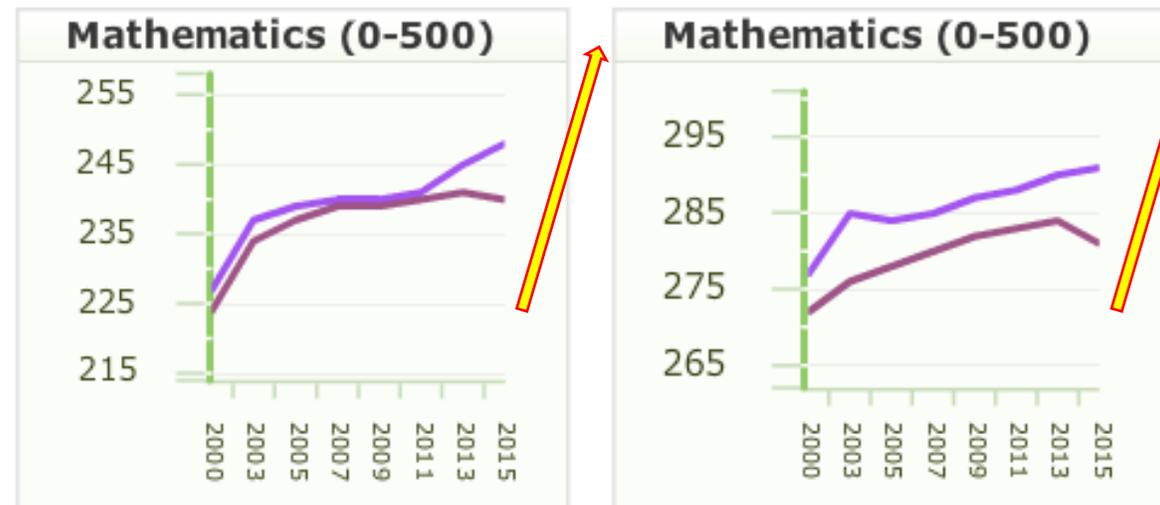
Grade 4 Grade 8

Average Scale Score over time for North Carolina



Grade 4 Grade 8

Average Scale Score over time for DoDEA

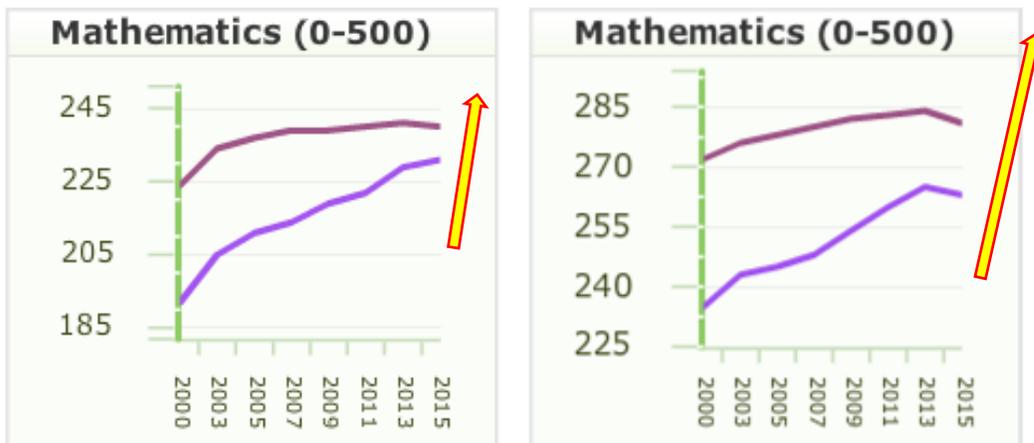


■ National public
 ■ DoDEA

Grade 4

Grade 8

Average Scale Score over time for District of Columbia



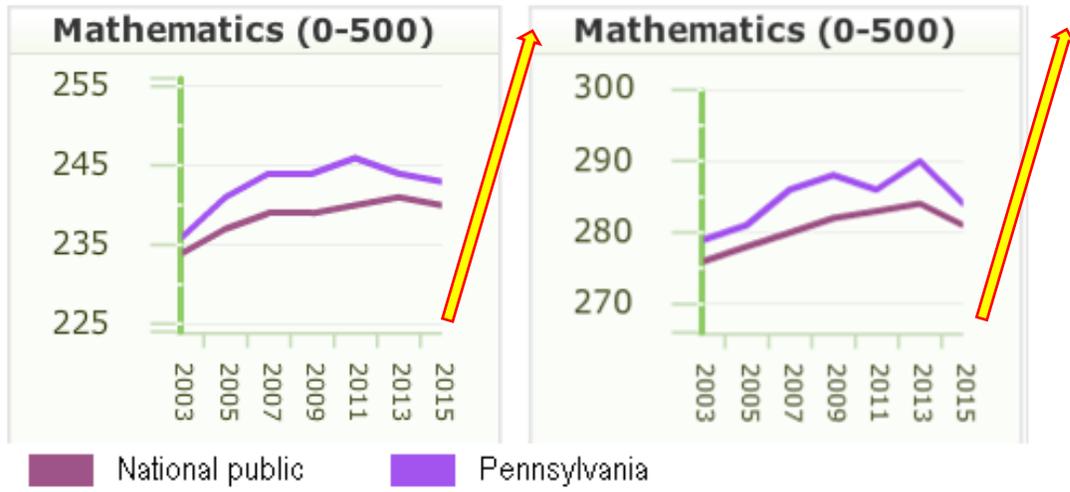
■ National public
 ■ District of Columbia

Grade 4

Grade 8

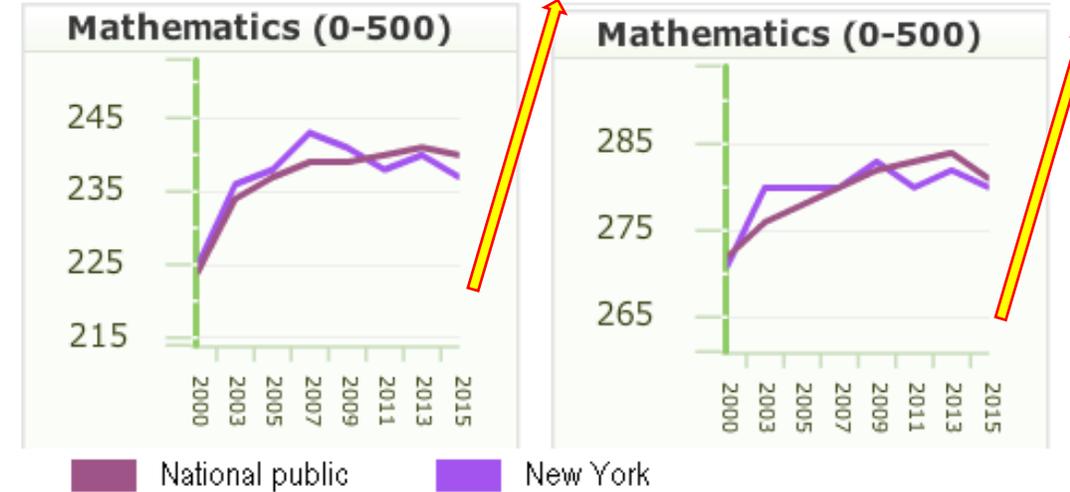
New England & North East

Average Scale Score over time for Pennsylvania



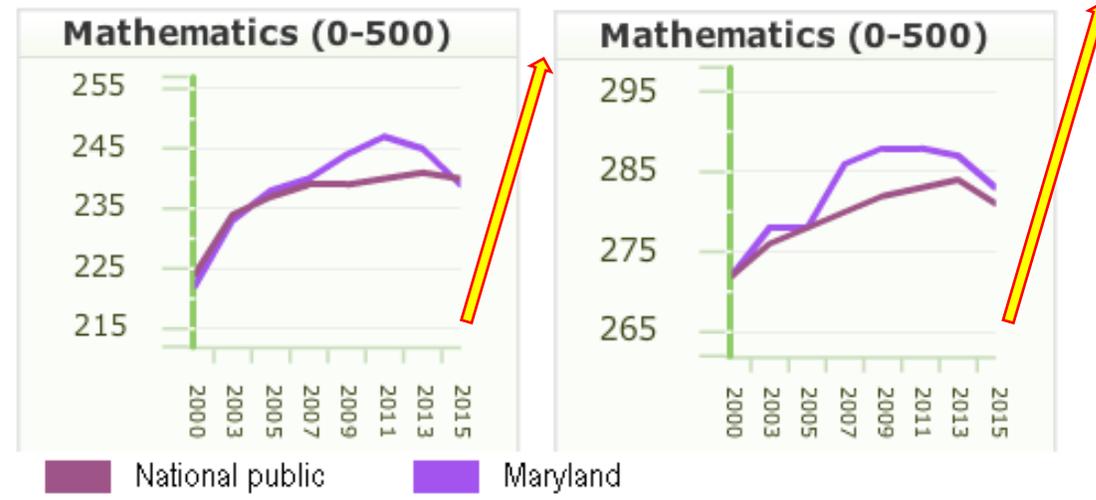
Grade 4 Grade 8

Average Scale Score over time for New York



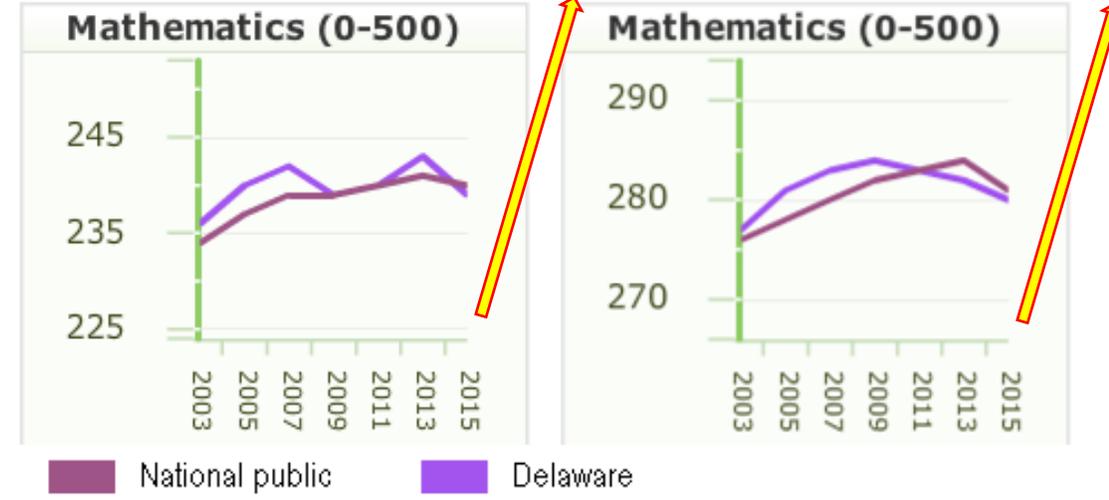
Grade 4 Grade 8

Average Scale Score over time for Maryland



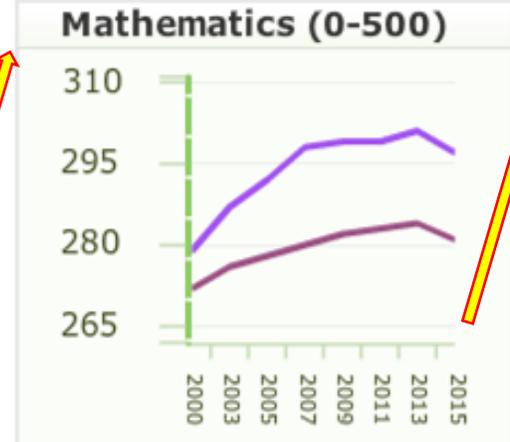
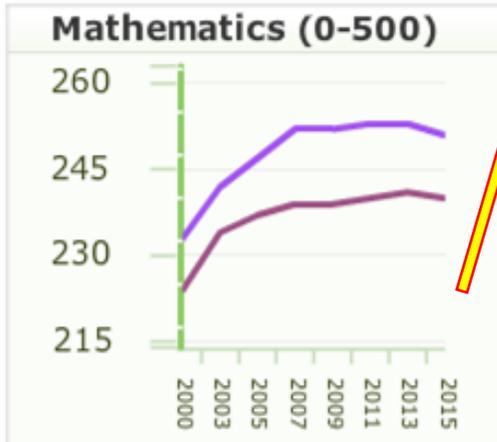
Grade 4 Grade 8

Average Scale Score over time for Delaware



Grade 4 Grade 8

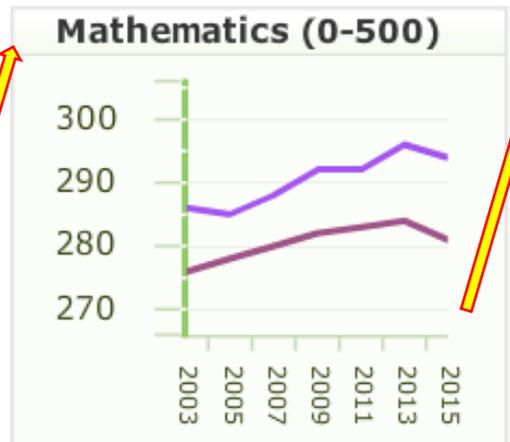
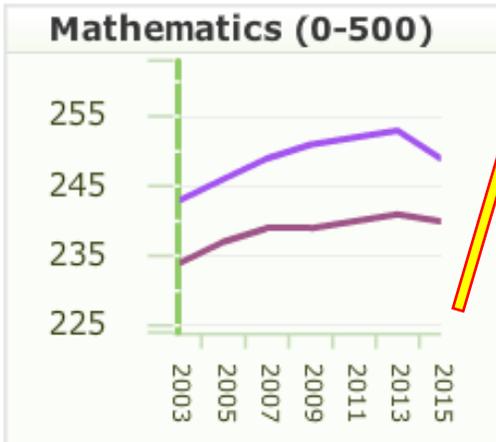
Average Scale Score over time for Massachusetts



National public Massachusetts

Grade 4 Grade 8

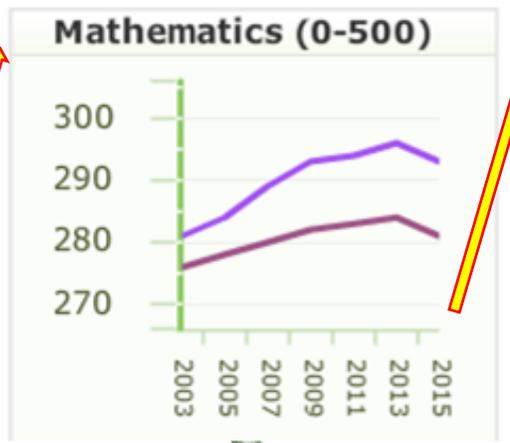
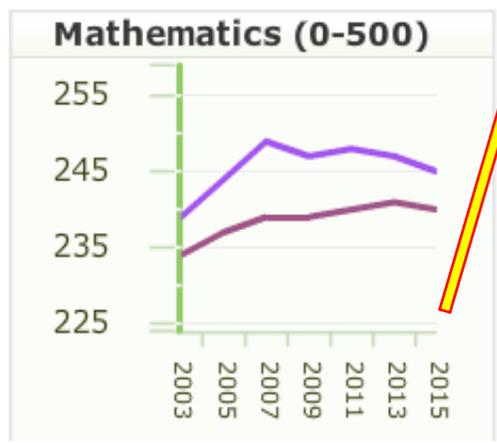
Average Scale Score over time for New Hampshire



National public New Hampshire

Grade 4 Grade 8

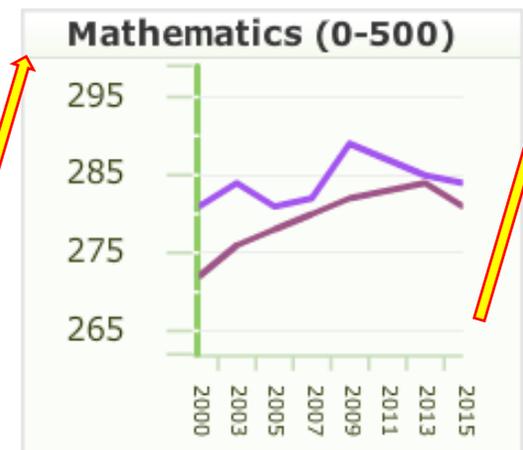
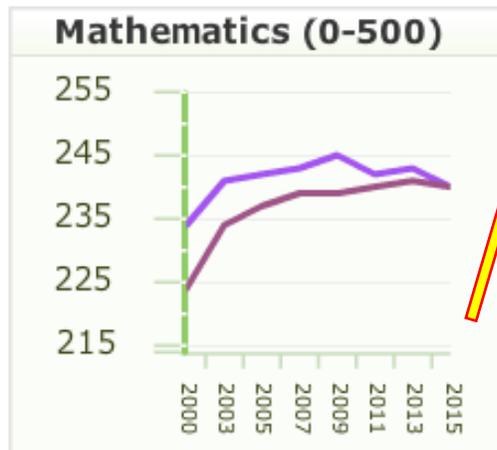
Average Scale Score over time for New Jersey



National public New Jersey

Grade 4 Grade 8

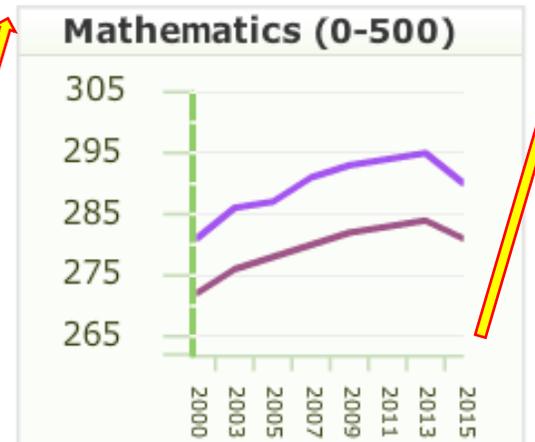
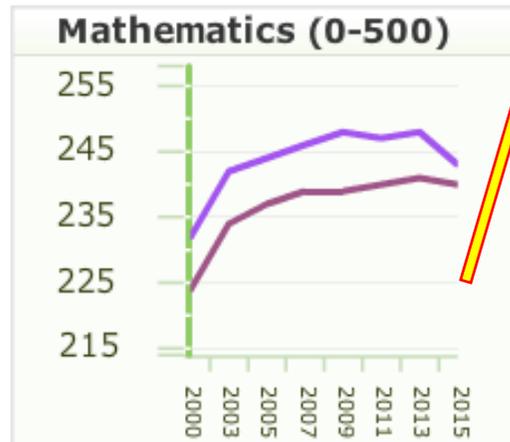
Average Scale Score over time for Connecticut



National public Connecticut

Grade 4 Grade 8

Average Scale Score over time for Vermont

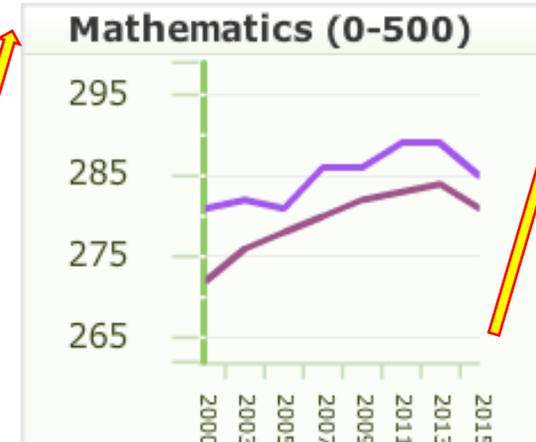
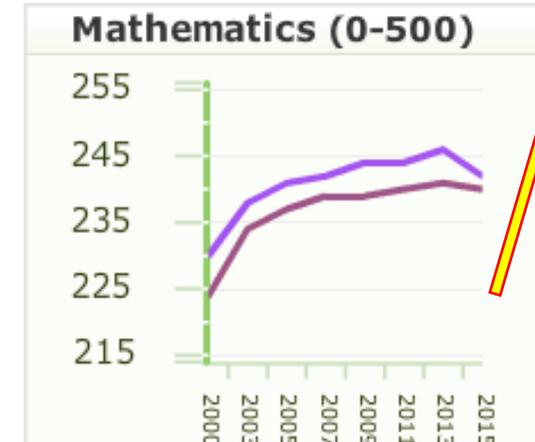


National public Vermont

Grade 4

Grade 8

Average Scale Score over time for Maine

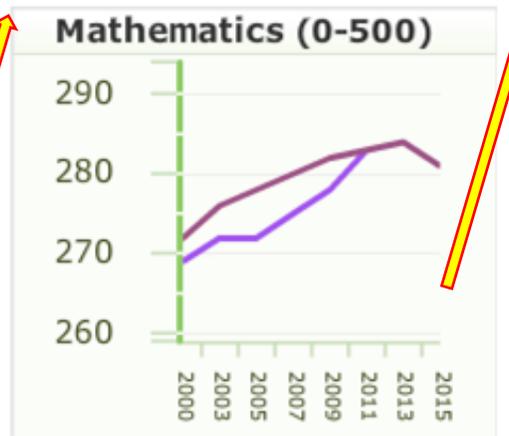
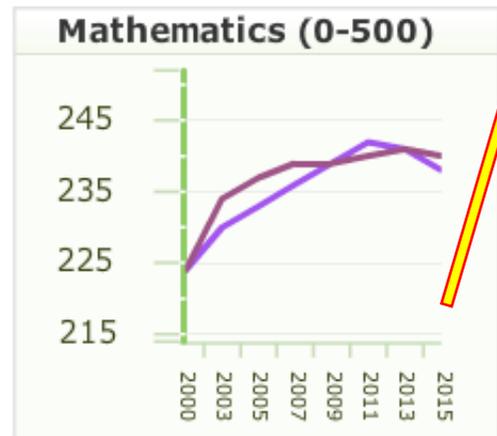


National public Maine

Grade 4

Grade 8

Average Scale Score over time for Rhode Island



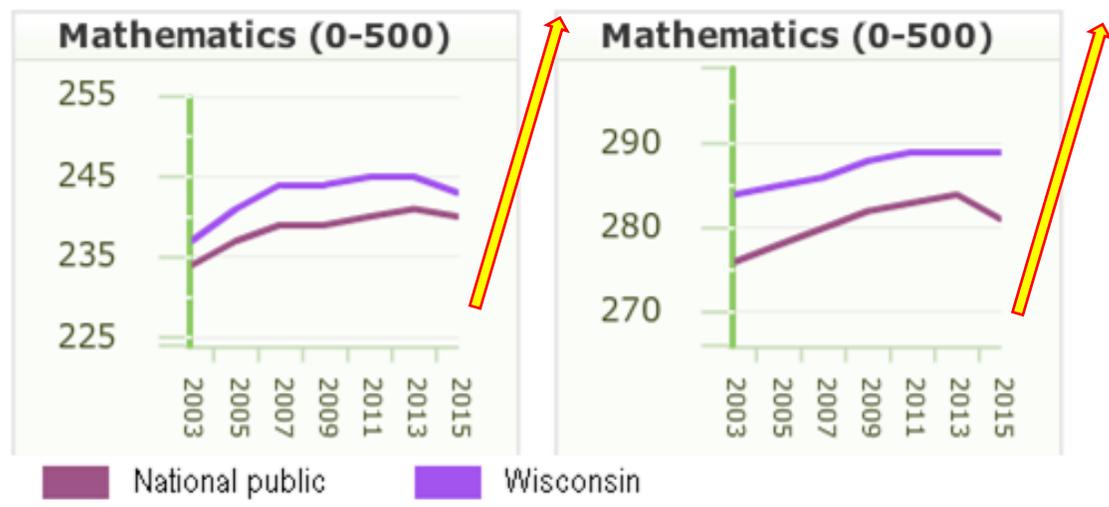
National public Rhode Island

Grade 4

Grade 8

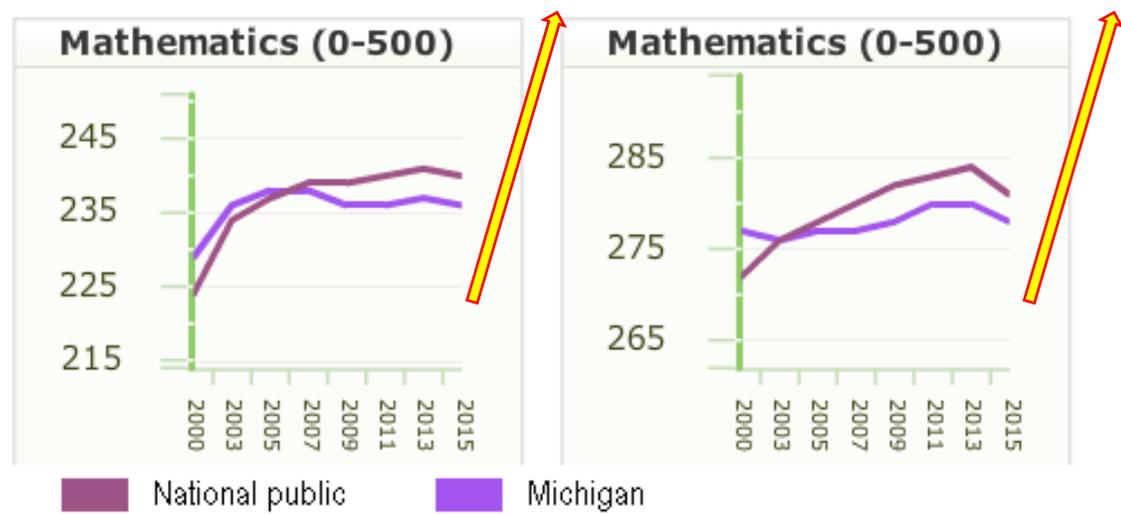
North Central-East

Average Scale Score over time for Wisconsin



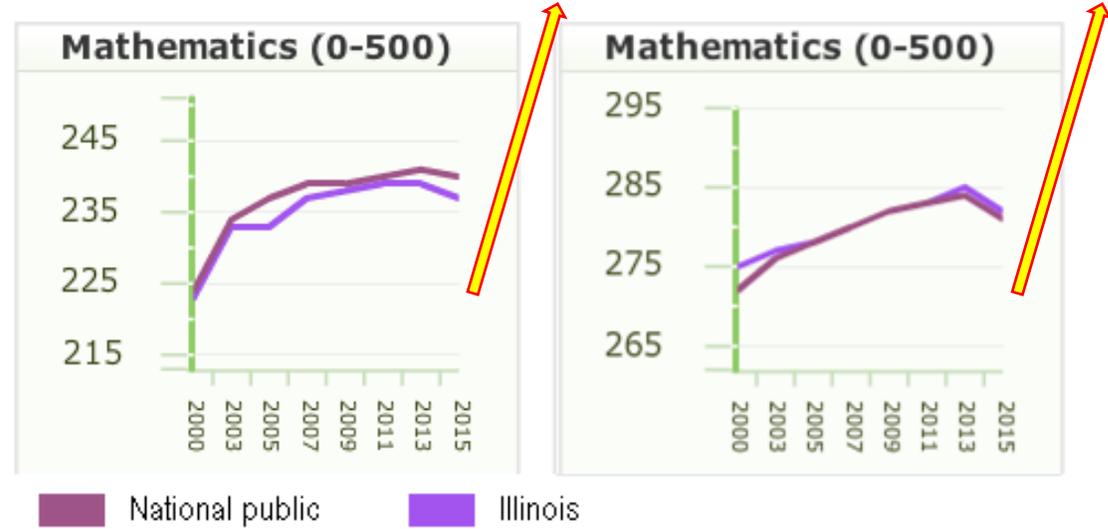
Grade 4 Grade 8

Average Scale Score over time for Michigan



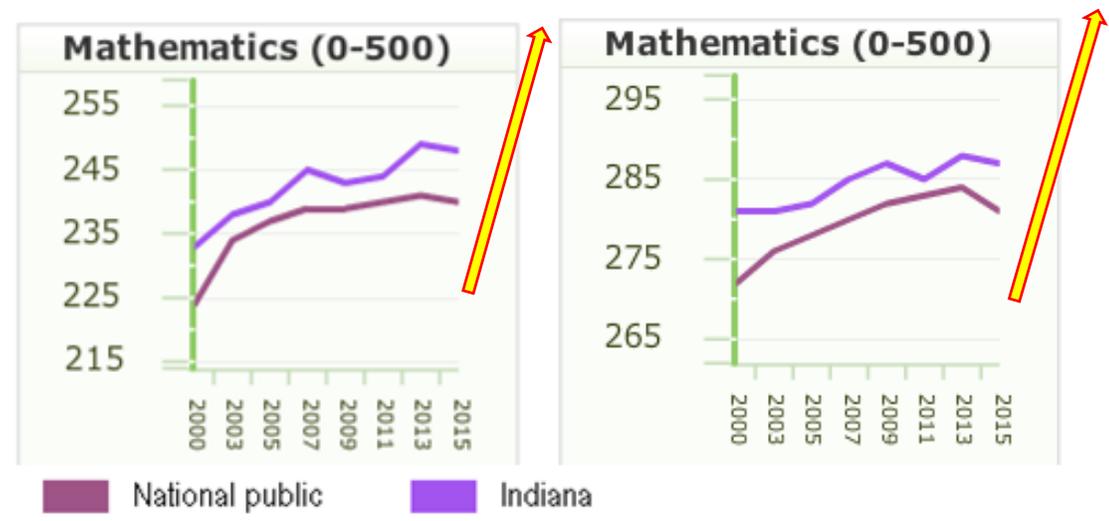
Grade 4 Grade 8

Average Scale Score over time for Illinois



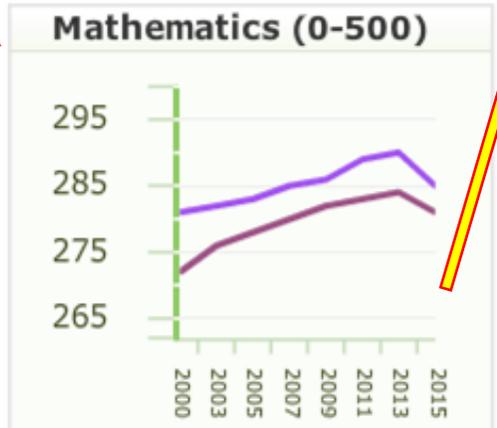
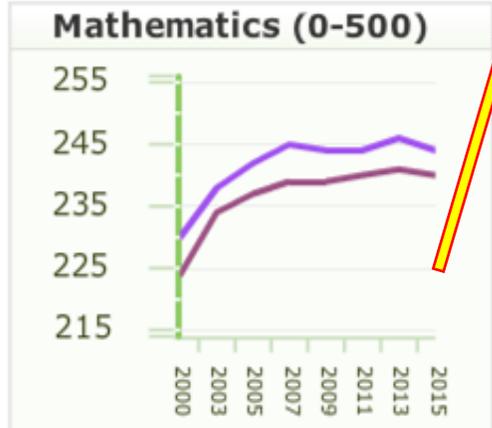
Grade 4 Grade 8

Average Scale Score over time for Indiana



Grade 4 Grade 8

Average Scale Score over time for Ohio

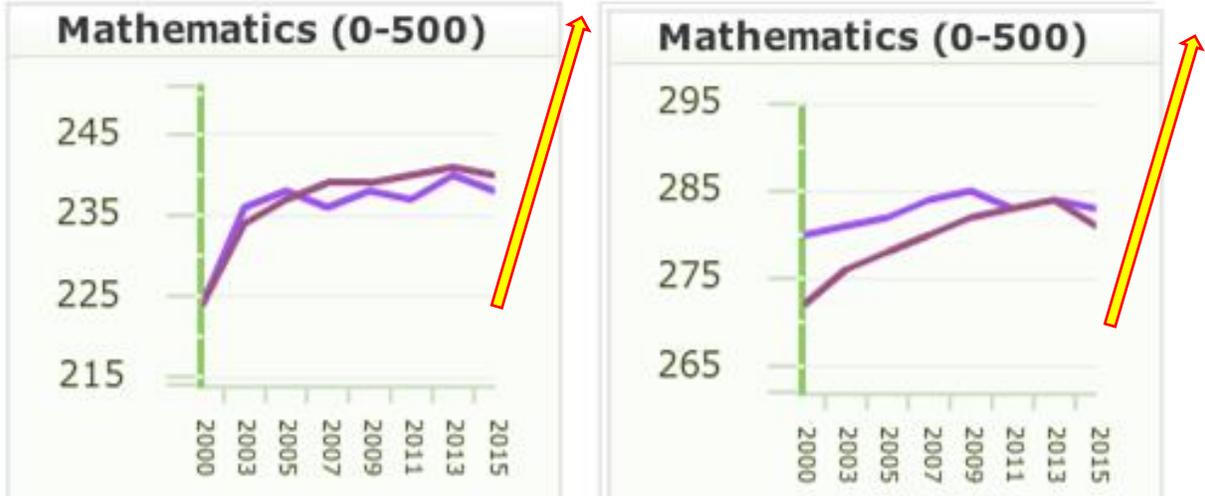


Grade 4

Grade 8

North-North to North West

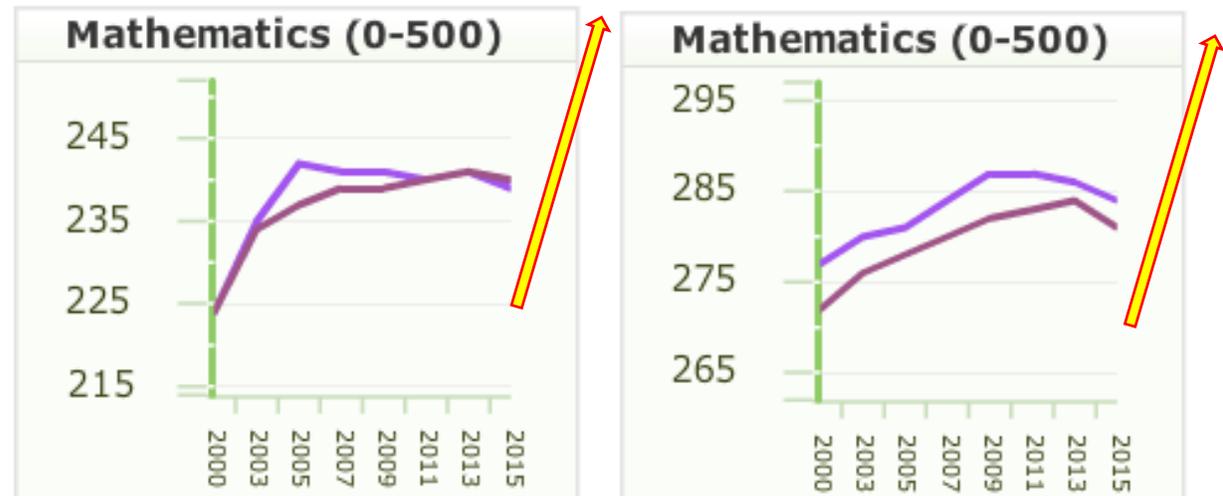
Average Scale Score over time for Oregon



National public Oregon

Grade 4 Grade 8

Average Scale Score over time for Idaho



National public Idaho

Grade 4 Grade 8

www.uslgoglobal.com