# Vermont Student Performance in a National Context 

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## Vermont is Different:

 Students by Race and Ethnicity|  | United States | Vermont |
| :--- | :---: | :---: |
| White | $48.2 \%$ | $90.7 \%$ |
| Black | $15.3 \%$ | $2.0 \%$ |
| Hispanic | $26.4 \%$ | $1.9 \%$ |

Digest of Education Statistics 2018, Table 203.70, fall 2016 data

## $4^{\text {th }}$ Grade Math NAEP Percent Proficient or Above

|  | United <br> States | Vermont | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| All Students | $40 \%$ | $39 \%$ | $\# 33$ |
| White Students | $52 \%$ | $40 \%$ | $\# 47$ |

Note: Rank is highest to lowest for all slides

Vermont and US: Race and Ethnicity

## $8^{\text {th }}$ Grade Math NAEP Percent Proficient or Above

|  | United <br> States | Vermont | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| All Students | $33 \%$ | $38 \%$ | $\# 11$ |
| White Students | $43 \%$ | $39 \%$ | $\# 31$ |

## 4th Grade Reading NAEP Percent Proficient or Above

|  | United <br> States | Vermont | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| All Students | $34 \%$ | $37 \%$ | $\# 15$ |
| White Students | $44 \%$ | $37 \%$ | $\# 44$ |

## 8th Grade Reading NAEP Percent Proficient or Above

|  | United <br> States | Vermont | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| All Students | $32 \%$ | $40 \%$ | $\# 4$ |
| White Students | $41 \%$ | $41 \%$ | $\# 25$ |

## 4th Grade Science NAEP (2015) Percent Proficient or Above

|  | United <br> States | Vermont | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| All Students | $37 \%$ | $48 \%$ | $\# 2$ |
| White Students | $50 \%$ | $49 \%$ | $\# 25$ |

## 8th Grade Science NAEP (2015) Percent Proficient or Above

|  | United <br> States | Vermont | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| All Students | $33 \%$ | $44 \%$ | $\# 5$ |
| White Students | $46 \%$ | $45 \%$ | $\# 21$ |

## Vermont and US: Poverty, Race and Ethnicity

## $4^{\text {th }}$ Grade Math NAEP <br> Percent Proficient or Above <br> Low Income Students

|  | United States <br> White | Vermont <br> White | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| Free and Reduced <br> Price Lunch Eligible | $35 \%$ | $28 \%$ | $\# 48$ |
| Not eligible | $61 \%$ | $48 \%$ | $\# 49$ |

## $8^{\text {th }}$ Grade Math NAEP <br> Percent Proficient or Above Low Income Students

|  | United States <br> White | Vermont <br> White | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| Free and Reduced <br> Price Lunch Eligible | $24 \%$ | $23 \%$ | \#30 |
| Not eligible | $51 \%$ | $47 \%$ | $\# 32$ |

## $4^{\text {th }}$ Grade Reading NAEP <br> Percent Proficient or Above Low Income Students

|  | United States <br> White | Vermont <br> White | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| Free and Reduced <br> Price Lunch Eligible | $28 \%$ | $21 \%$ | $\# 49$ |
| Not eligible | $53 \%$ | $47 \%$ | $\# 42$ |

## $8^{\text {th }}$ Grade Reading NAEP <br> Percent Proficient or Above Low Income Students

|  | United States <br> White | Vermont <br> White | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| Free and Reduced <br> Price Lunch Eligible | $26 \%$ | $29 \%$ | $\# 12$ |
| Not eligible | $48 \%$ | $47 \%$ | $\# 23$ |

## Other Measures of Student Performance:

 High School Dropouts as Percent of 16-24 YearOlds 2013-2017|  | United States | Vermont | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| All | $6.0 \%$ | $4.0 \%$ | $\# 7$ |
| White | $4.5 \%$ | $3.9 \%$ | $\# 21$ |
| 2018 Digest of Education Statistics, Table 219.85b |  |  |  |

## U.S. and Vermont Comparisons

|  | United States | Vermont | Vermont Rank |
| :--- | ---: | ---: | :---: |
| Student/Teacher Ratio fall 2016 | 16.0 | 10.8 | \#1 lowest |
| Student/Staff Ratio fall 2016 | 7.8 | 4.9 | \#1 lowest |
| Average Elementary Class Size 2011-12 | 21.2 | 16.6 | \#1 lowest |
| Average High School Class Size 2011-12 | 26.8 | 19.8 | \#4 lowest |
| Average Teacher Salary 2017-18 | $\$ 60,483$ | $\$ 58,527$ | \#15 highest |
| Pct of Teachers with Master's Degree 2011-12 | $47.7 \%$ | $52.0 \%$ | \#15 highest (46 states) |
| Pct of Students IDEA 2017-18 | $13.7 \%$ | $16.7 \%$ | \#9 highest |
| Pct of Students ELL 2016-17 | $9.6 \%$ | $1.7 \%$ | \#2 lowest |
| Pct of Students FRL 2015-16 | $52.1 \%$ | $38.4 \%$ | \#9 lowest |
| Spending per Student 2015-16 | $\$ 11,841$ | $\$ 19,023$ | \#4 highest |

## Conclusions: Compared to the U.S.

- Vermont is very different demographically
- Demographic characteristics point to better student outcomes
- Demographic-adjusted outcomes are not better
- Vermont's K -12 education spending is one of the highest in the nation
- Taxpayers spend a lot for average performance at best


## Thank you

Supplemental slides follow

## 2019 NAEP: Percent Below Basic

| Grade and Test | United States <br> White Students | Vermont <br> White Students | Vermont <br> Rank |
| :--- | :---: | :---: | :---: |
| $4^{\text {th }}$ Grade Math | $12 \%$ | $18 \%$ | $\# 2$ |
| $4^{\text {th }}$ Grade Reading | $24 \%$ | $31 \%$ | $\# 5$ |
| $8^{\text {th }}$ Grade Math | $21 \%$ | $24 \%$ | $\# 13$ |
| $8^{\text {th }}$ Grade Reading | $19 \%$ | $22 \%$ | $\# 9$ |
| $4^{\text {th }}$ Grade Science $(2015)$ | $12 \%$ | $14 \%$ | $\# 14$ |
| $8^{\text {th }}$ Grade Science $(2015)$ | $19 \%$ | $19 \%$ | $\# 24$ |

## $4^{\text {th }}$ Grade Math: Percent of White Students Below Basic



## Gender Issues: $4^{\text {th }}$ Grade Math

|  | U.S. | Vermont |
| :--- | :---: | :---: |
|  | Percent Proficient or Above |  |
| White Boys | $55 \%$ | $42 \%$ |
| White Girls | $49 \%$ | $37 \%$ |
|  |  |  |
|  | Percent Below Basic |  |
| White Boys | $11 \%$ | $17 \%$ |
| White Girls | $12 \%$ | $19 \%$ |

## $4^{\text {th }}$ Math $10^{\text {th }}$ and $90^{\text {th }}$ Percentiles White Students



## $4^{\text {th }}$ Grade Math Sample Question, Medium Level of Difficulty

A rule for a number pattern is shown in the box.

After the first number, each number in the pattern is 7 more than the previous number.

Which of the following number patterns follows the rule?

```
AO 7,7,7,7,7
BO 7,17,27,37,47
CO 2,7,14,21,28
DO 2,9,16,23,30
```


## $8^{\text {th }}$ Grade Math Sample Question, Hard Level of Difficulty

The sale price of milk at a store is 25 percent off the regular price.
Which of the following statements describes the sale price of milk at the store?

| AO | $\frac{1}{25}$ off the regular <br> price |
| :---: | :--- |
| BO | $\frac{1}{5}$ off the regular price |
| CO | $\frac{1}{4}$ off the regular price |
| DO | $\frac{1}{3}$ off the regular price |
| EO | $\frac{2}{5}$ off the regular price |

Clear Answer

| NAEP Basic <br> (214) | Fourth-grade students performing at <br> the NAEP Basic level should show some evidence of <br> understanding the mathematical concepts and <br> procedures in the five NAEP content areas. |
| :---: | :--- |
|  | Fourth-graders performing at the NAEP Basic level should be <br> able to estimate and use basic facts to perform simple <br> computations with whole numbers, show some <br> understanding of fractions and decimals, and solve some <br> simple real-world problems in all NAEP content areas. <br> Students at this level should be able to use-though not <br> always accurately-four-function calculators, rulers, and <br> geometric shapes. Their written responses will often be <br> minimal and presented without supporting information. |


| NAEP Proficient <br> (249) | Fourth-grade students performing at <br> the NAEP Proficient level should consistently apply integrated <br> procedural knowledge and conceptual understanding to <br> problem solving in the five NAEP content areas. |
| :---: | :--- |
|  | Fourth-graders performing at the NAEP Proficient level should be <br> able to use whole numbers to estimate, compute, and determine <br> whether results are reasonable. They should have a conceptual <br> understanding of fractions and decimals; be able to solve real- <br> world problems in all NAEP content areas; and use four-function <br> calculators, rulers, and geometric shapes appropriately. Students <br> performing at the NAEP Proficient level should employ problem- <br> solving strategies such as identifying and using appropriate <br> information. Their written solutions should be organized and |
| presented both with supporting information and explanations of |  |
| how they were achieved. |  |

