

Delaware Science DSTP
Grade 8 and 11
Spring 2002

K. Martin
Delaware Science Coalition
October, 2002

DSTP Facts

- 3rd time administered (2000, 2001, 2002)
- Measures student progress towards the Delaware Science Content Standards
- Requires students to demonstrate
 - Declarative knowledge (what)
 - Procedural (how)
 - Schematic knowledge (why)
- Targets the “BIG IDEAS” in science
 - Structure/function relationships
 - Energy-matter transformations
 - Physical/chemical properties
 - Laws/theories (e.g. conservation of matter, plate tectonics)

Points

- 32 multiple choice items of one point each
- 18 short response items of 2 points each
- Total of 68 points
- Has four sub categories
 - Inquiry (11 points or 15% of test)
 - Physical (19 points or 30% of test)
 - Earth (16 points or 25% of test)
 - Life (22 points or 30% of test)
- All 68 points translated into Standards-based scores ranging from 100-500. We call this the MEAN or SCALE score.

Performance Levels

All scale scores are then translated into performance levels.

Level/Category

- **1** Well below Standard: Needs significant improvement
- **2** Below Standard: Needs improvement
- **3** Meets Standard: Good performance
- **4** Exceeds the Standard: Very good performance
- **5** Distinguished: Excellent performance

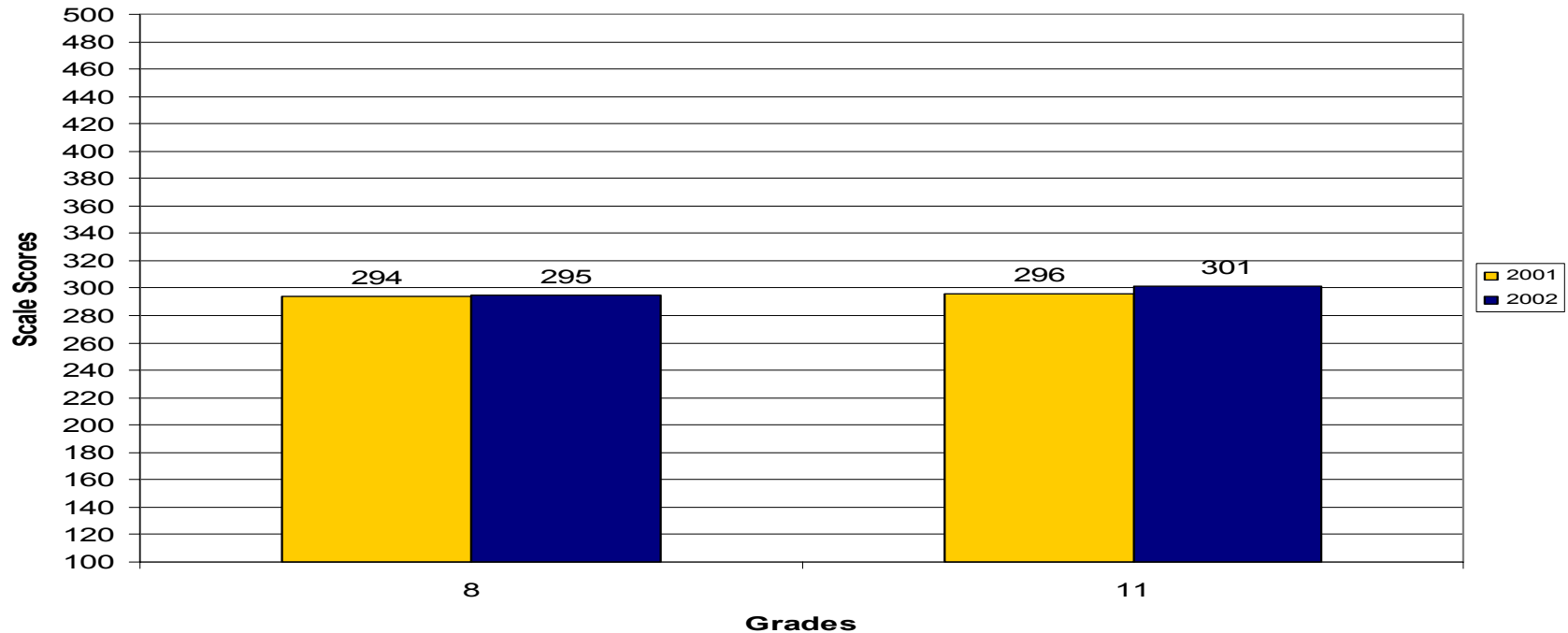
Cut Scores

Cut scores determine the level of performance.

Grade	Below	Meets	Exceeds	Distinguished
8	280	300	325	338
11	282	300	325	335

2001-2002 Scale Score Comparison

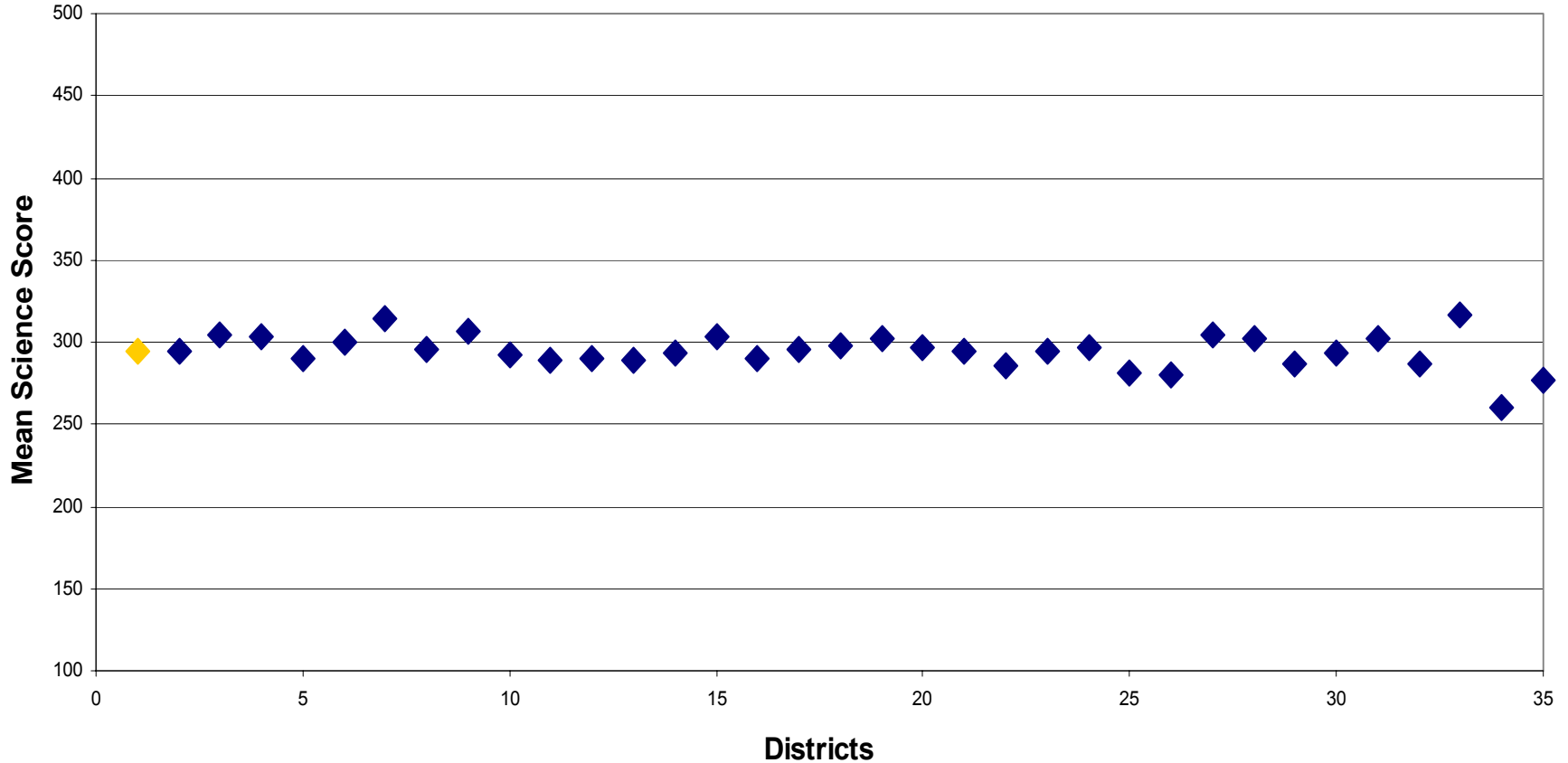
Standards-Based Scores, Science DSTP



Grades 8 and 11 showed slight increases in mean scores from 2001 to 2002.

Delaware Grade 8 Science DSTP, Spring 2002

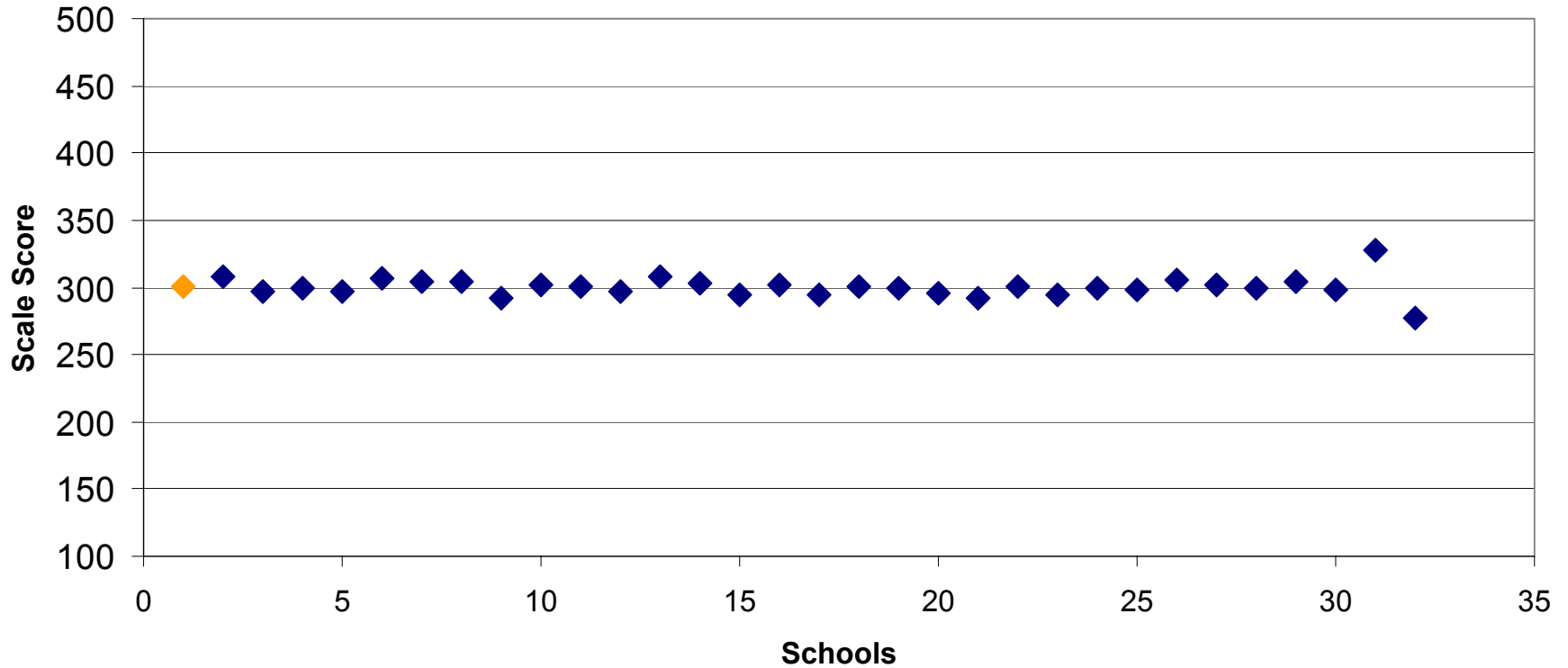
District Scale Scores



District mean scores range closely together from 285 to 302.

K. Martin
Delaware Science Coalition
October, 2002

Delaware Grade 11 Science DSTP, Spring 2002 Scale Scores

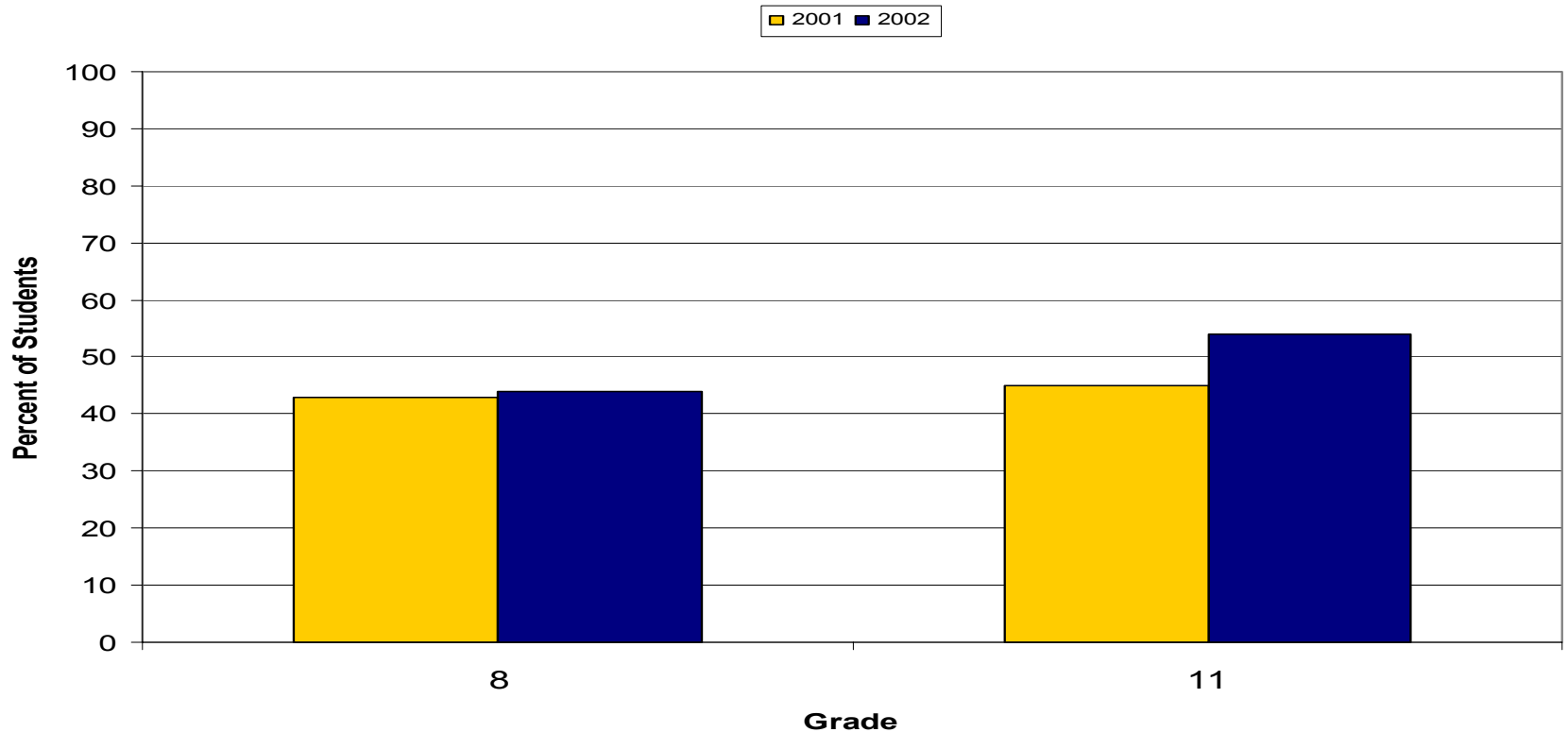


**Grade 11 scores ranged from 277 to 327,
including charter schools.**

K. Martin
Delaware Science Coalition
October, 2002

Percent of Students Meeting or Exceeding the Science Standards 2001-2002

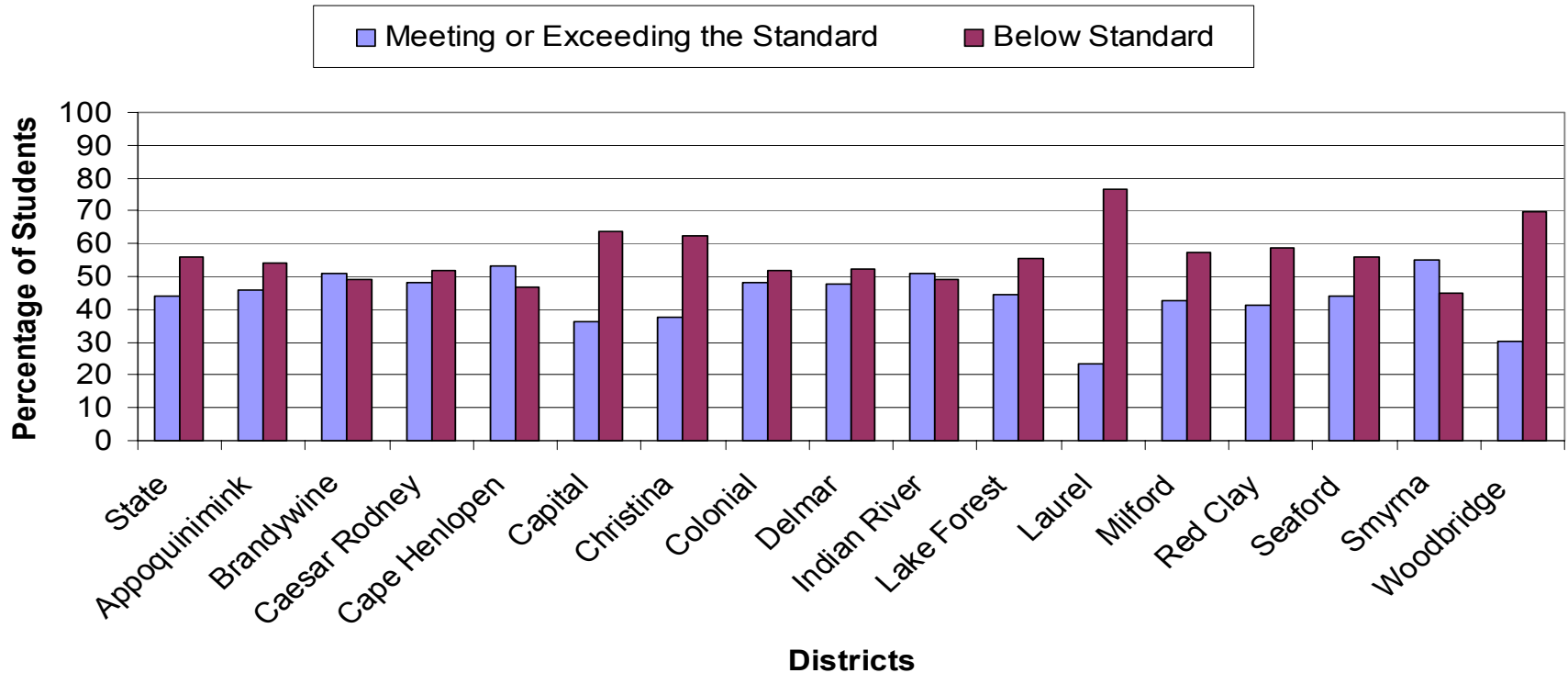
Percent of Students Meeting/Exceeding the Science Standards



The percent of students meeting or exceeding the Science Standards at was 44% at grade 8 and 54% at grade 11.

Delaware Grade 8 Science DSTP, Spring 2002

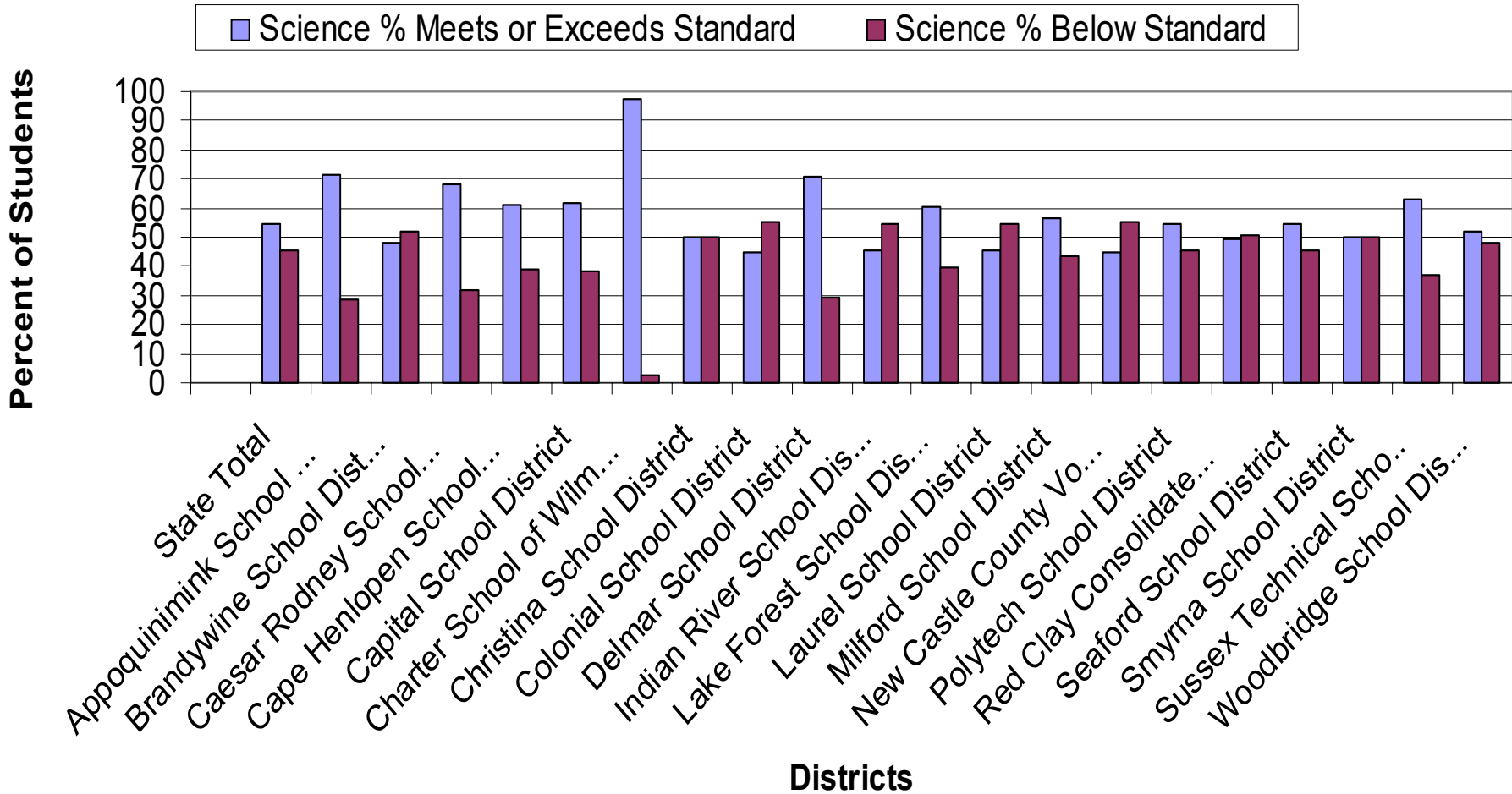
% of Students Meeting (3,4,5) or Below (1,2) Standard



13 out of 16 districts had more students not meeting the science Standard than those who did.

Delaware Grade 11 Science DSTP, Spring 2002

% of Students Meeting/Exceeding and Below the Standard



Special Education

Special Education students are required to take the science DSTP either:

- under regular conditions

OR

- test with accommodations

OR

- participate in the DAPA (Delaware Alternate Portfolio System)

Limited English Proficient Students

LEP students are required to take the Science DSTP either:

- Under regular conditions

OR

- With accommodations

OR

- Are exempted from all or part of the test

School Accountability

Scores for **ALL** students who test, regardless of accommodations, are translated into performance levels. These levels earned by students are used for both student and school accountability.

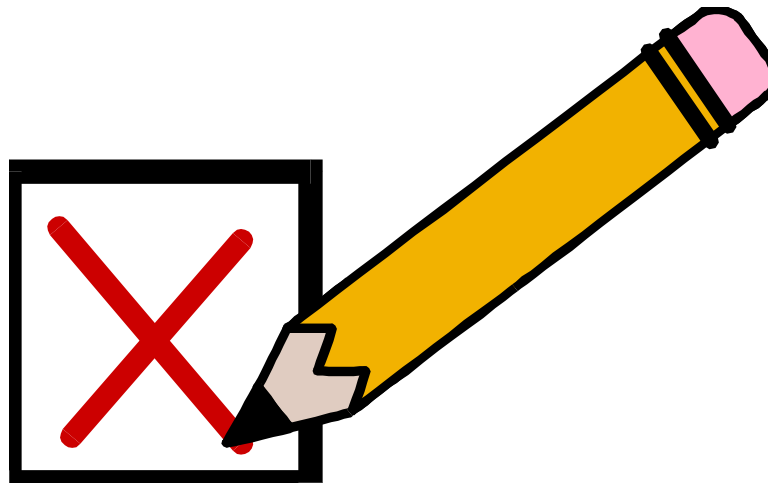


Absences, Suspensions, Expulsions

- Students are considered **absent** IF they were not present for the entire test week and make-up test week.
- **Expelled** students during both test week and make-up week DO NOT take the DSTP.
- Expelled students in an alternative program are required to take the DSTP.
- **Special exemptions** are granted for medical or mental conditions, emergencies, accidents, etc...AND for all students who did not complete all parts of the test due to conditions beyond their control during the weeks of testing.
- **Invalidations** may result because of cheating, disruptive behavior, refusal to test, etc...

What is a valid score?

A valid score is at least one item completed by the student.



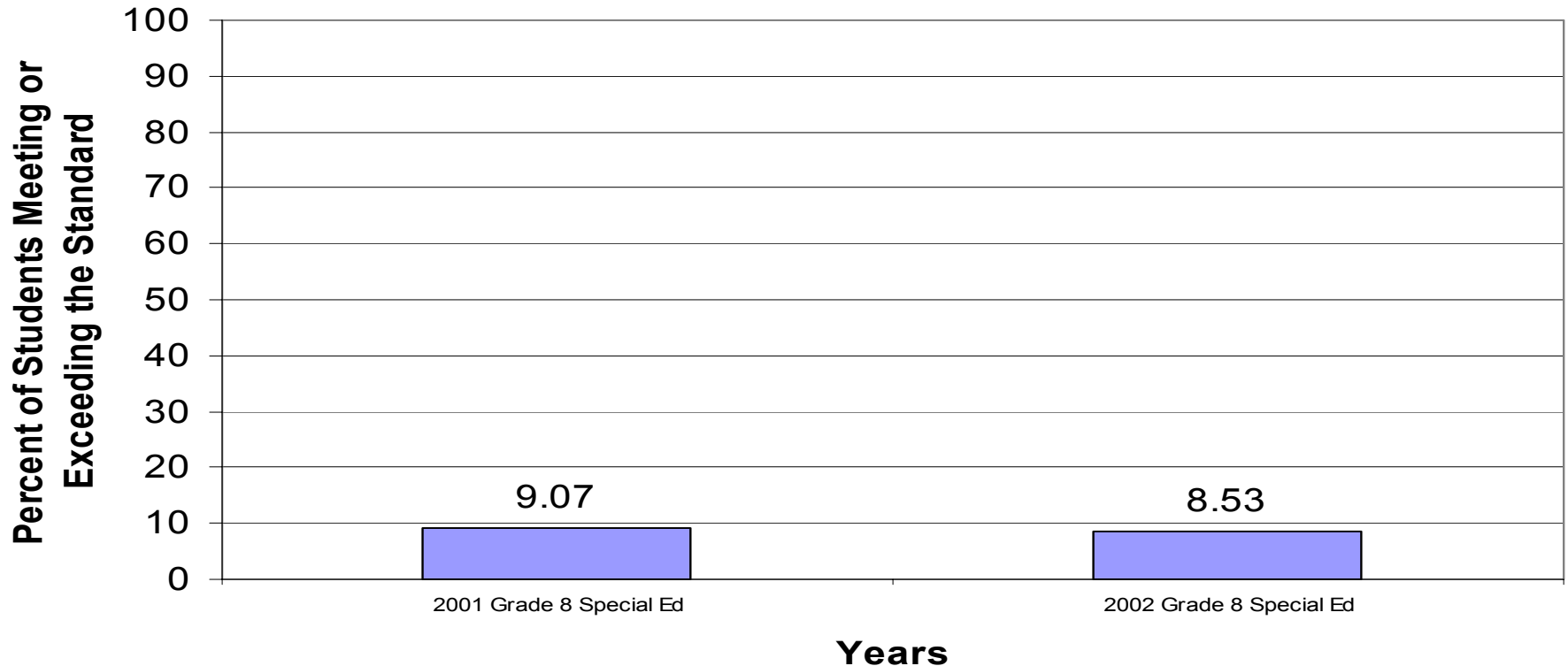
Disaggregations

Data is disaggregated by:

- Gender
- Race/ethnicity
- Free/reduced lunch meal eligibility
- Title I
- Disability
- English proficiency
- Migrant status



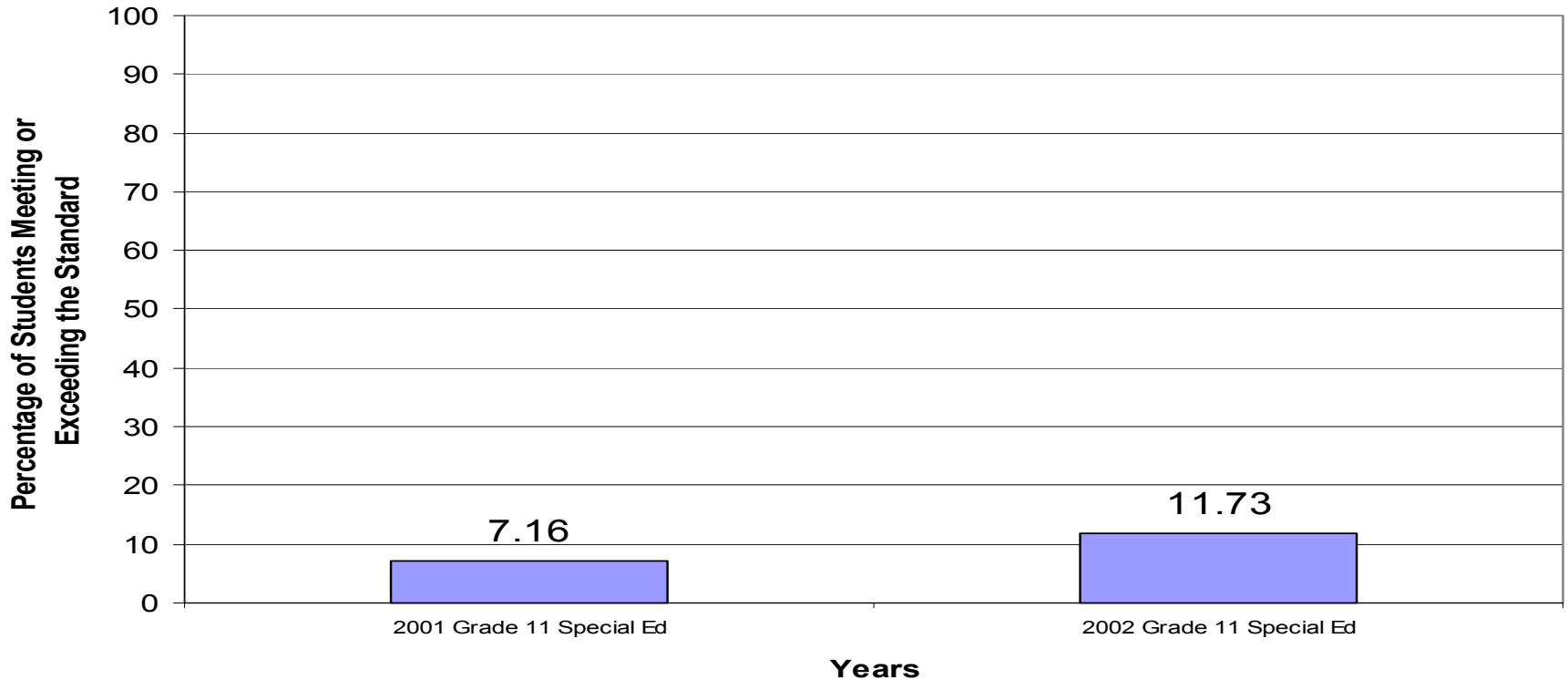
Delaware Grade 8 Science DSTP % of Special Education Students Meeting or Exceeding the Standard 2001-2002



Approximately 90% of special education students at grade 8 are below the Standard in science.

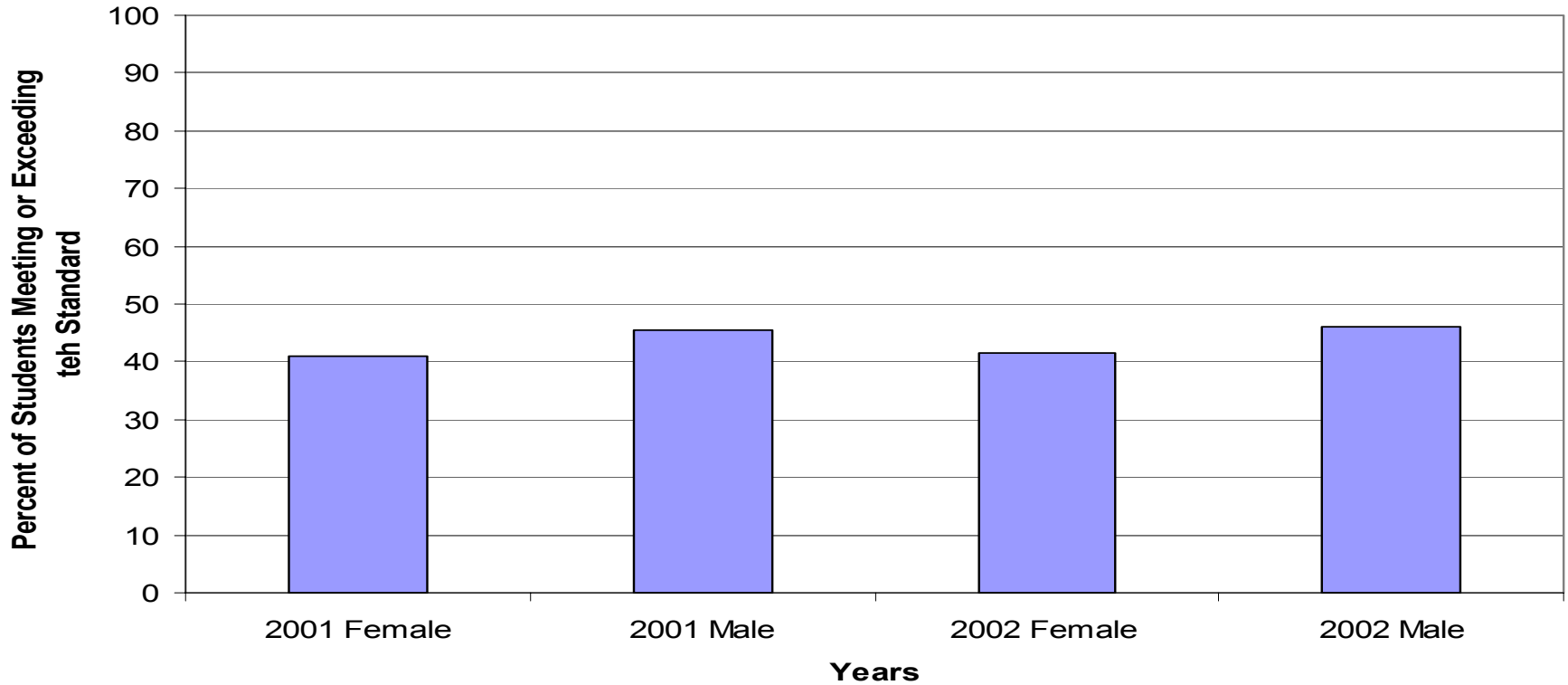
K. Martin
Delaware Science Coalition
October, 2002

Delaware Science Grade 11 DSTP % of Special Education Students Meeting or Exceeding the Standard 2001-2002



Approximately 88% of special education students are below the science Standard in grade 11.

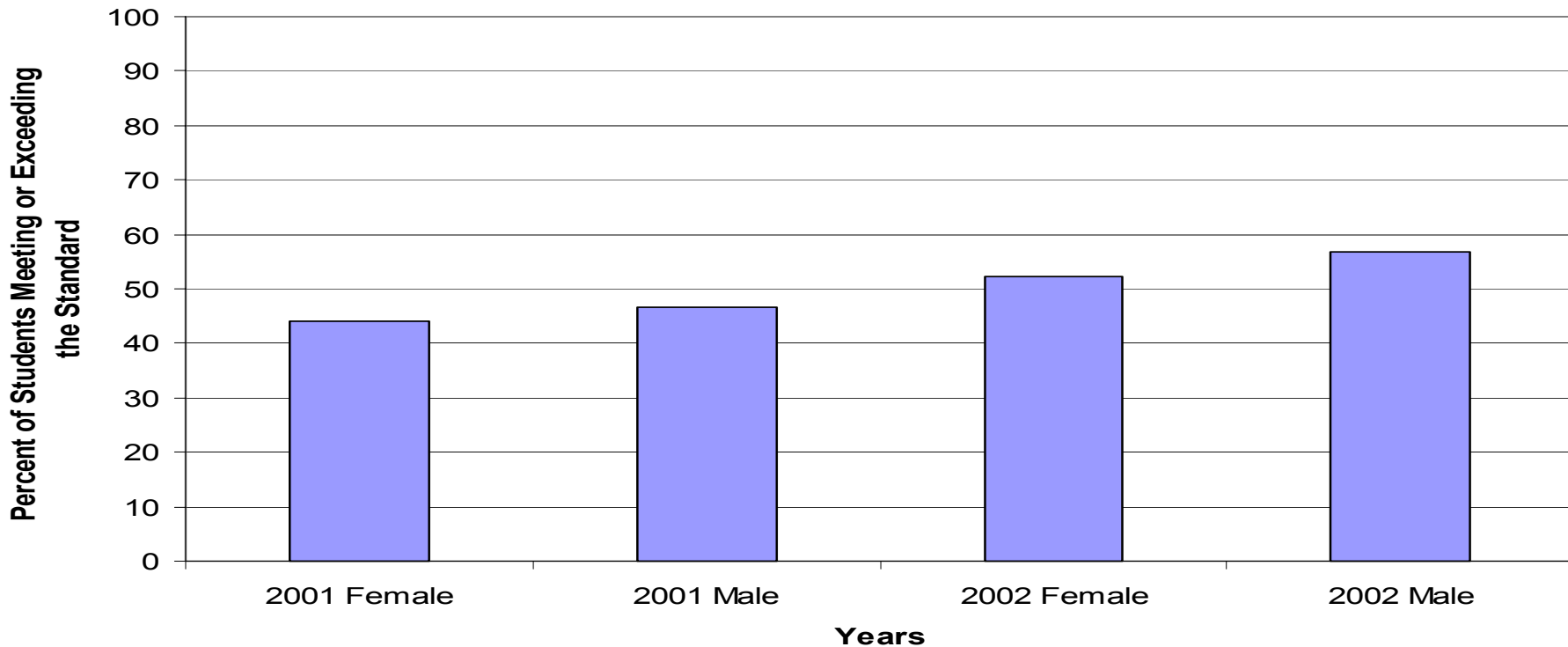
Delaware Science Grade 8 DSTP % of Female and Male Students Meeting or Exceeding the Standard 2001-2002



Basically, no gender gap is evident from the grade 8 science scores.

Delaware Science DSTP Grade 11

% of Male and Female Students Meeting or Exceeding the Standard 2001-2002

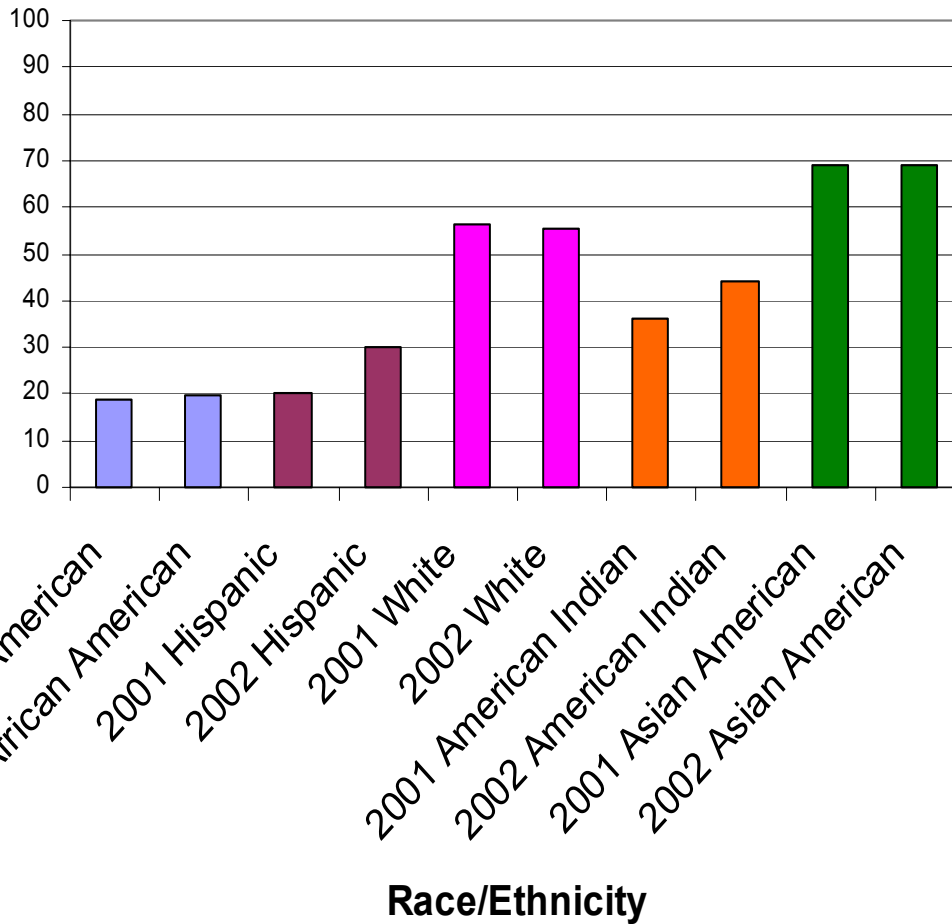


No gender gap is evident from the science scores at grade 11.

Grade 8 Science DSTP

% of Students Meeting or Exceeding the Standard by Race/Ethnicity 2001-2002

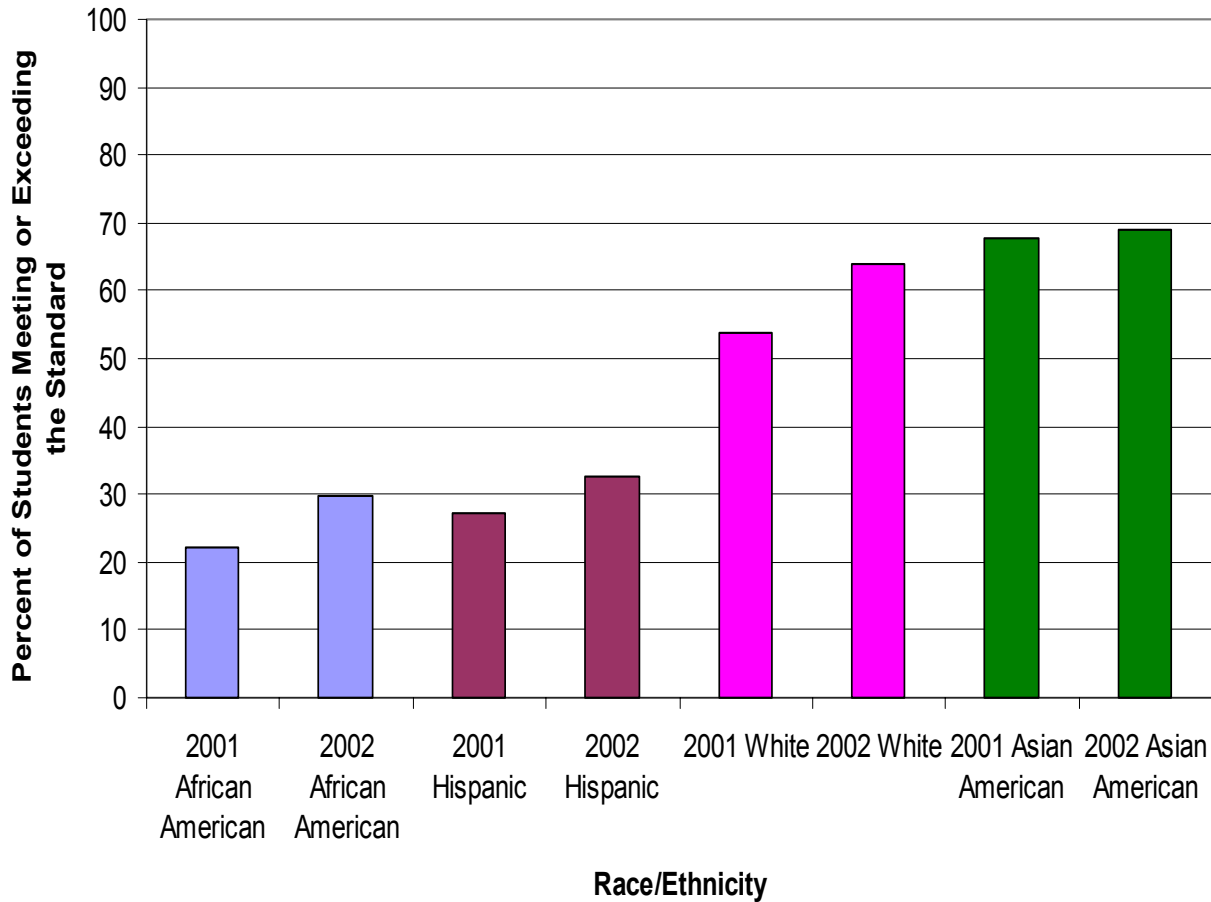
Percent of Students Meeting or Exceeding the Standard



Fewer African American students meet or exceed the science Standard at grade 8 than any other race.

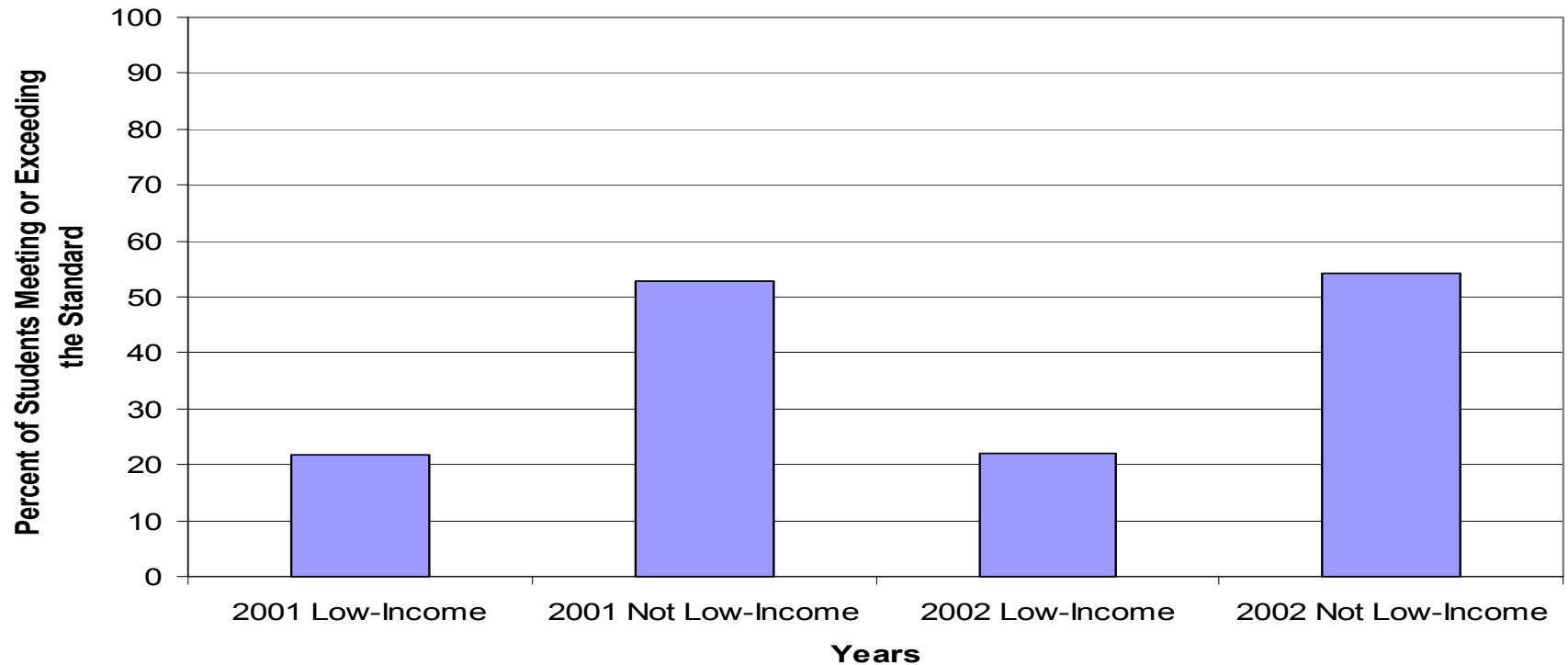
Delaware Grade 11 Science DSTP

% of Students Meeting or Exceeding the Standard by Race/Ethnicity



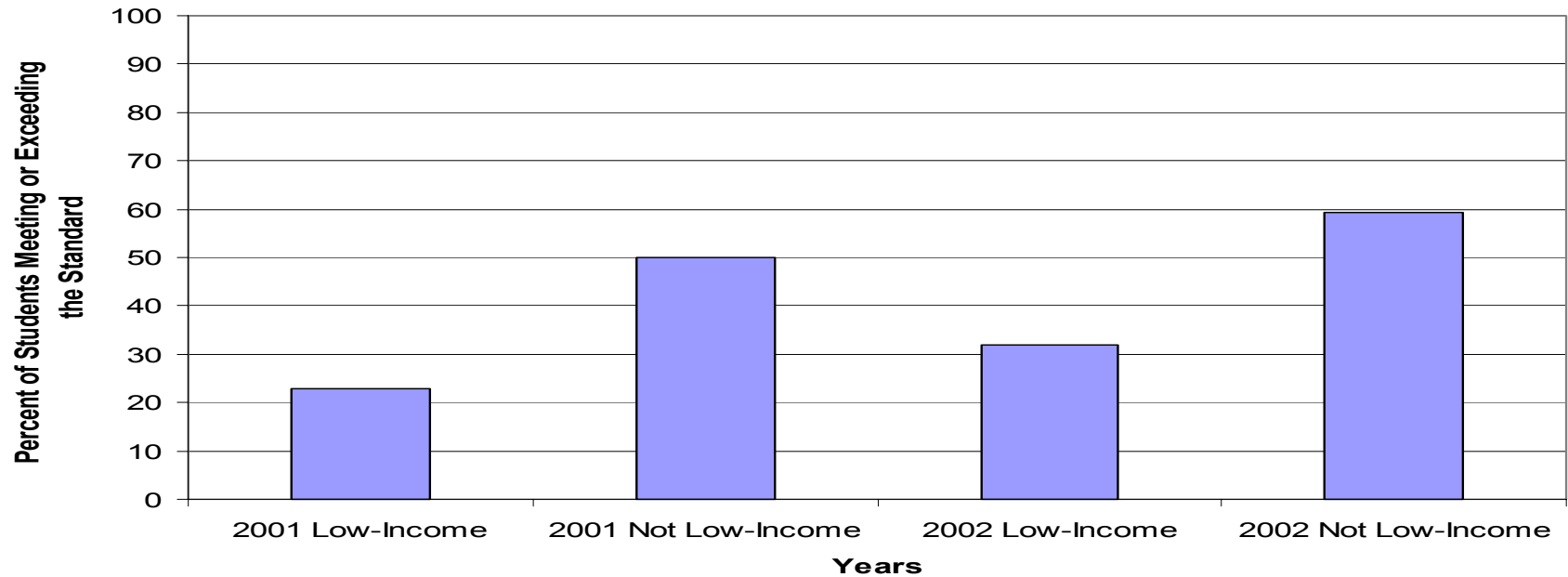
Fewer African American students meet or exceed the standard at grade 11 than any other race.

Delaware Grade 8 Science DSTP % of Students Meeting or Exceeding the Standard by Income Level 2001-2002



Low income students scores are less than half of those of the non-low income peers at grade 8.

Delaware Grade 11 Science DSTP % of Students Meeting or Exceeding the Standard by Income Level



At grade 11, low income students' scores are about half of the regular students' scores.

Statewide Conclusions

- Grade 8 and Grade 11 **Mean** are very similar. Grade 8 = 294.9 and Grade 11 = 300.9.
- 2285 **less** students take the science test in grade 11 than in grade 8.
- Grade 11 showed a 9 percentage point increase in scores from 2001-2002 whereas grade 8 showed a 1 percentage point increase in scores from 2001-2002.

Statewide Conclusions

- About 90% of special education students do not meet the science standard at grade 8 or 11.
- Male and female scores for grades 8 and 11 are nearly the same. There is no appreciable gender difference in scores.

Statewide Conclusion

- Far fewer African American students meet or exceed the standard than any other race/ethnicity at both grades 8 and 11.
- Non-low income students are scoring double what the low income students are scoring at both grades 8 and 11.