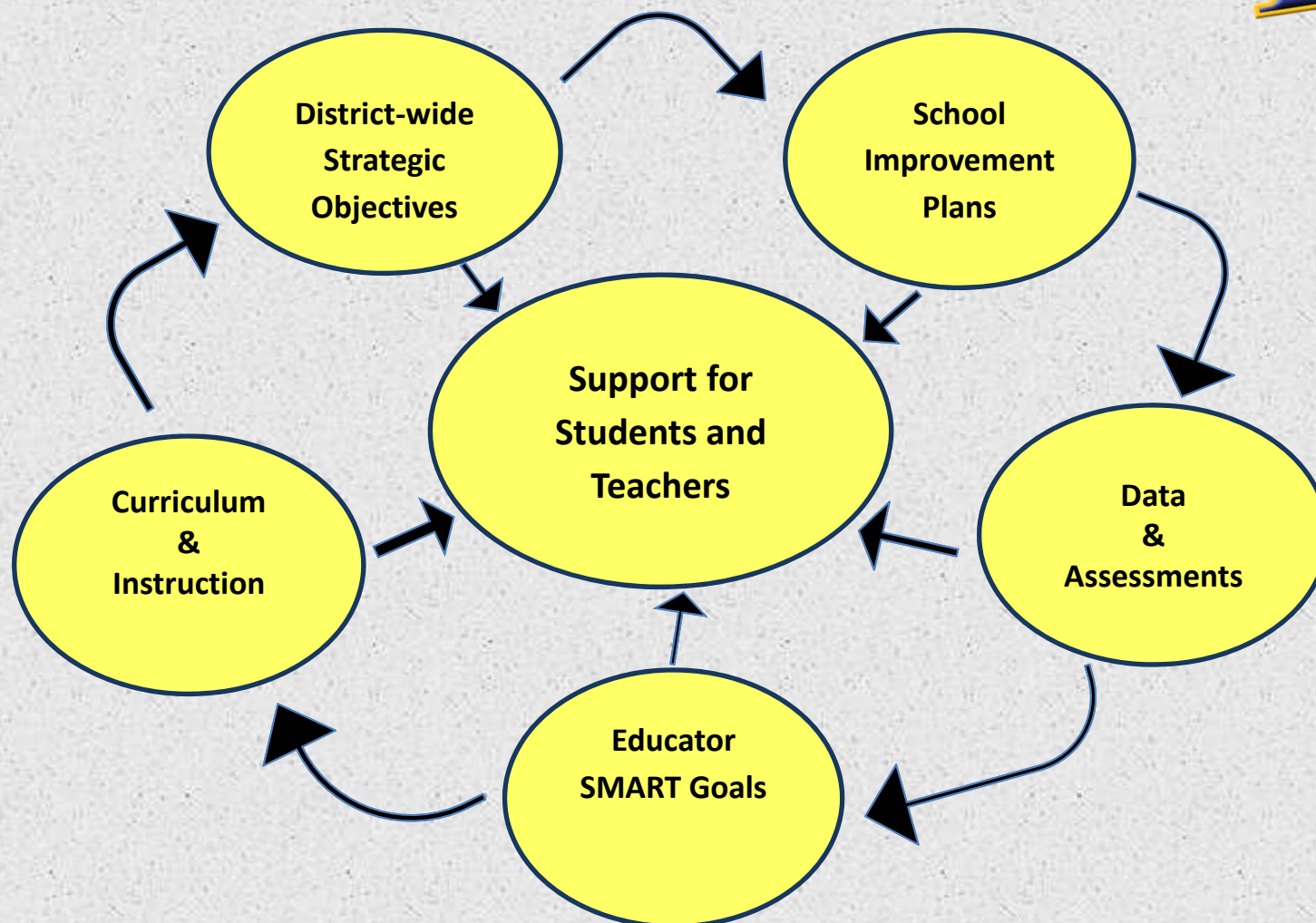


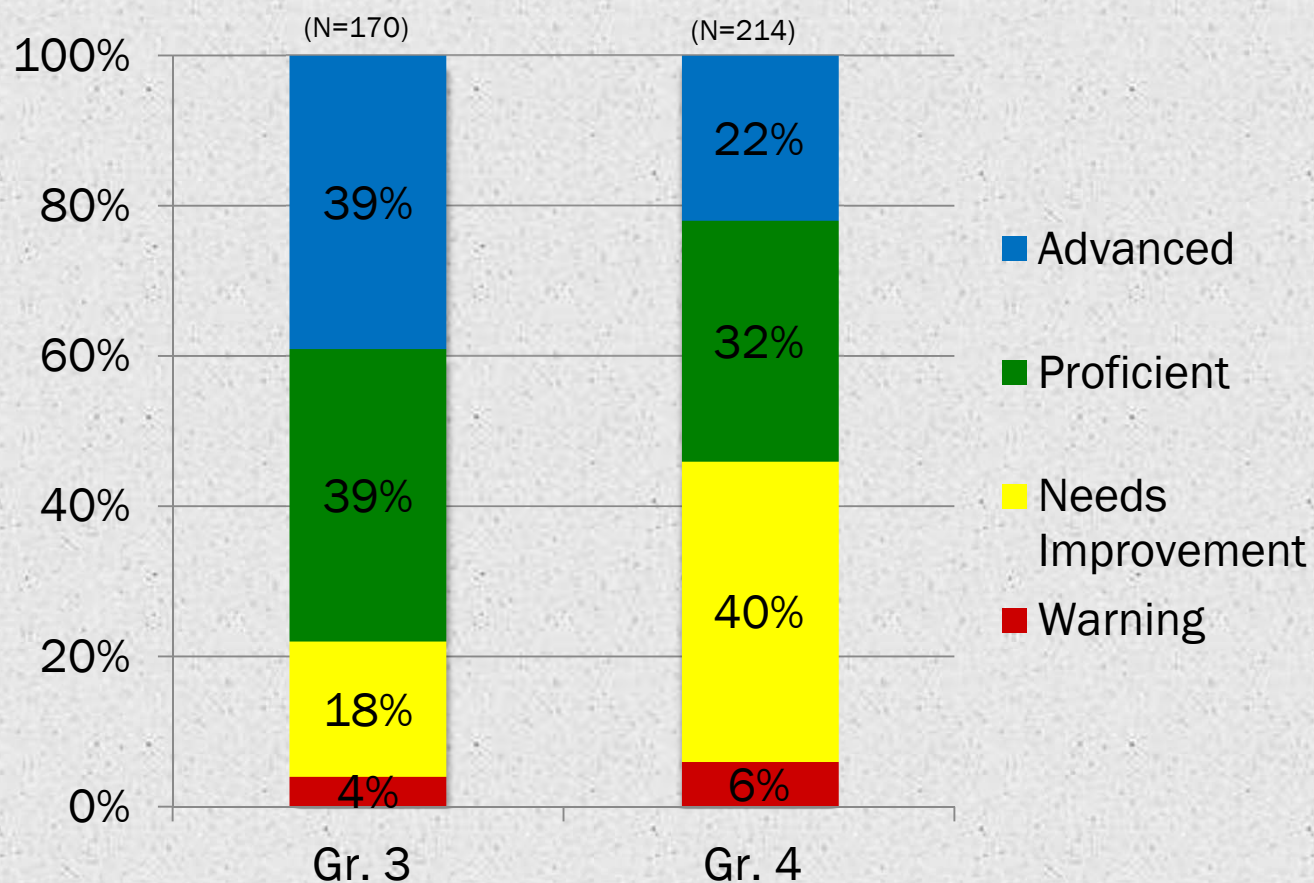


Elementary & Middle School
2014 Mathematics MCAS
Evaluation & Strategy





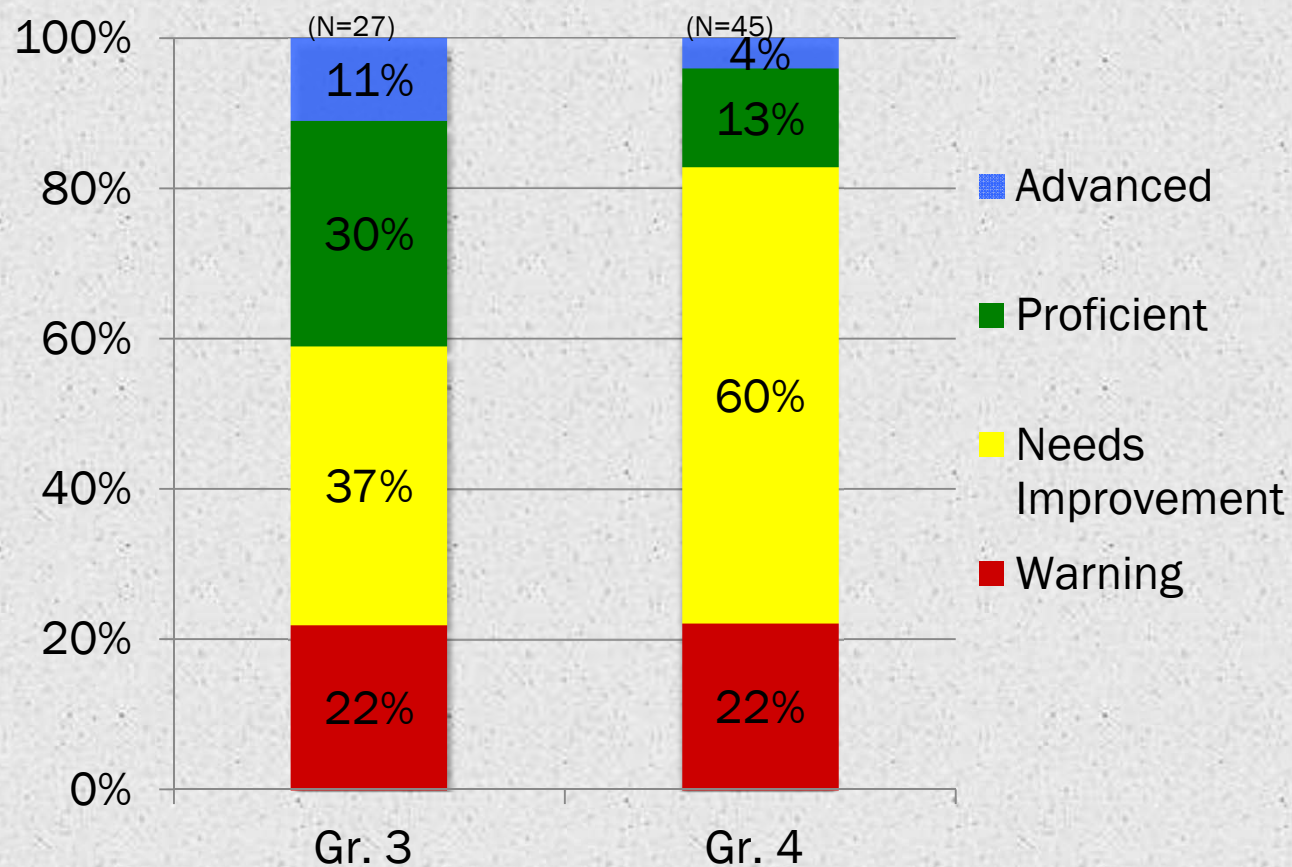
Grades 3 & 4





Grades 3 & 4

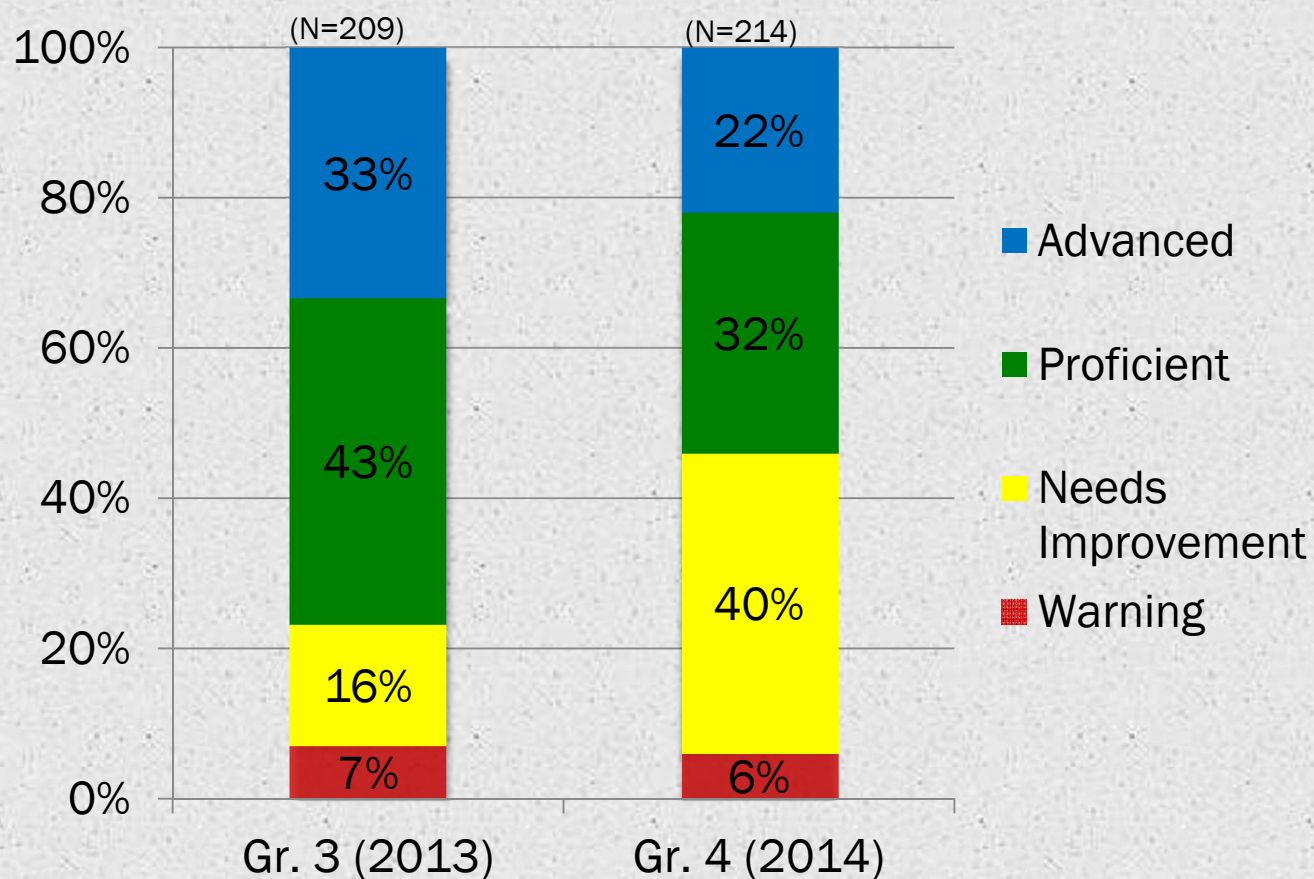
Students with Disabilities





Current Grade 5 Cohort

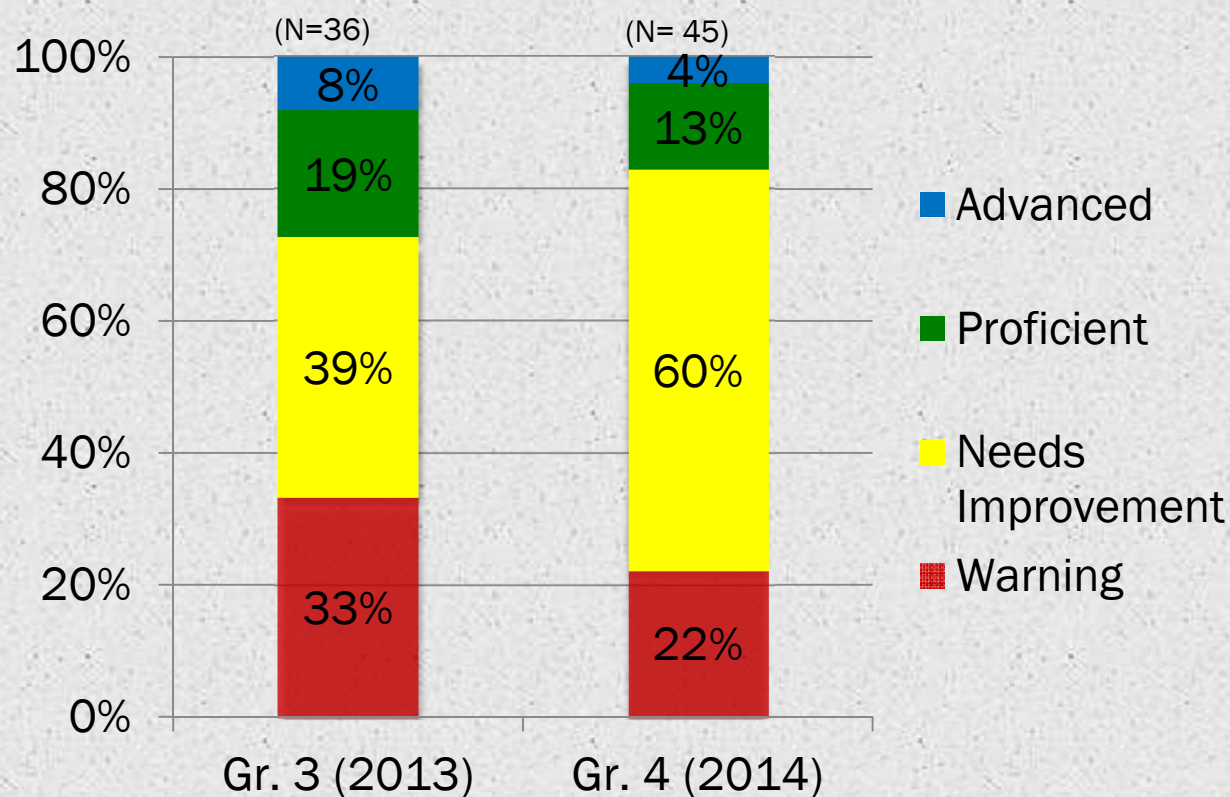
(Same group of student's performance over time)





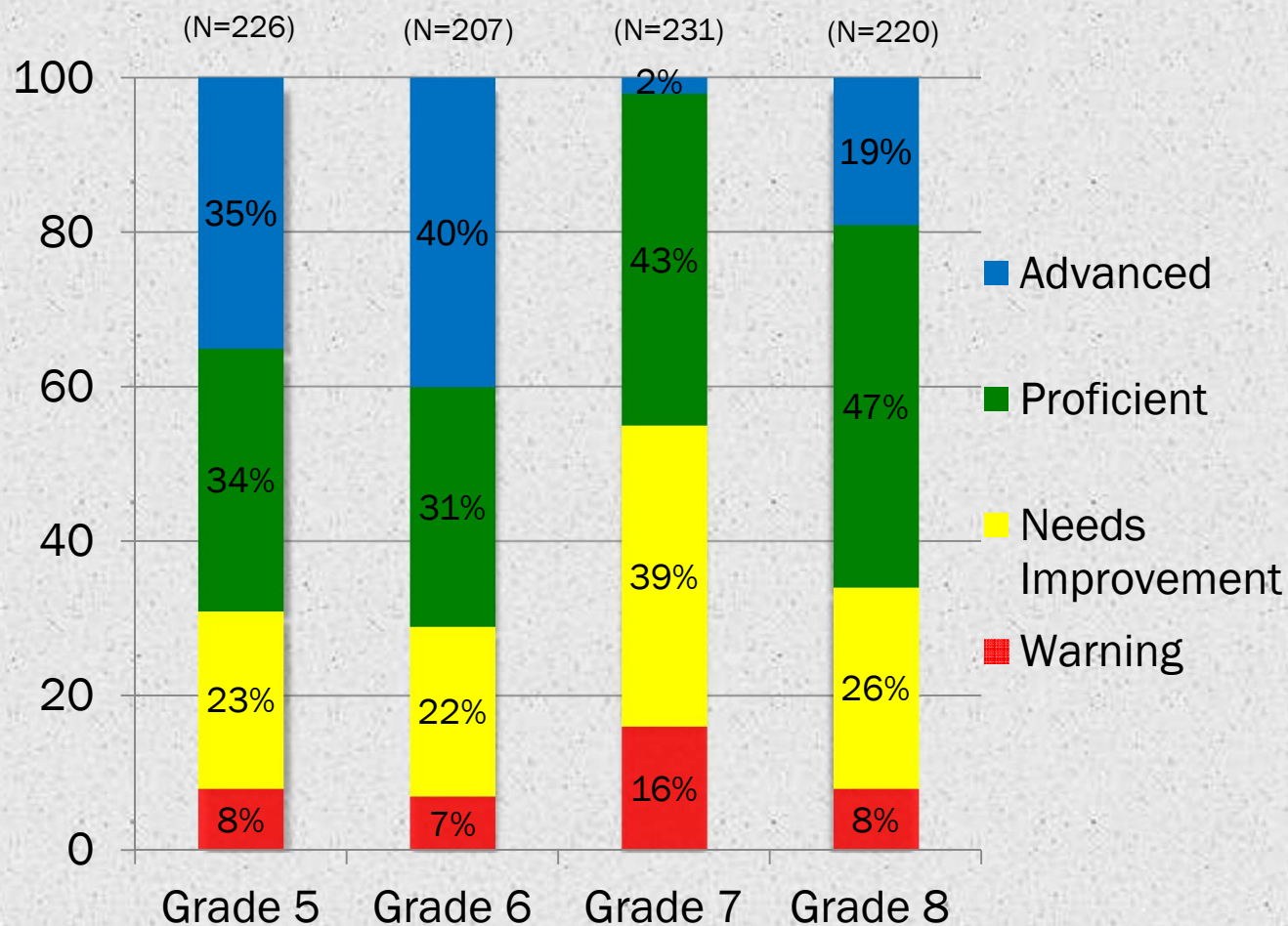
Current Grade 5 Cohort Students with Disabilities

(Same group of student's performance over time)





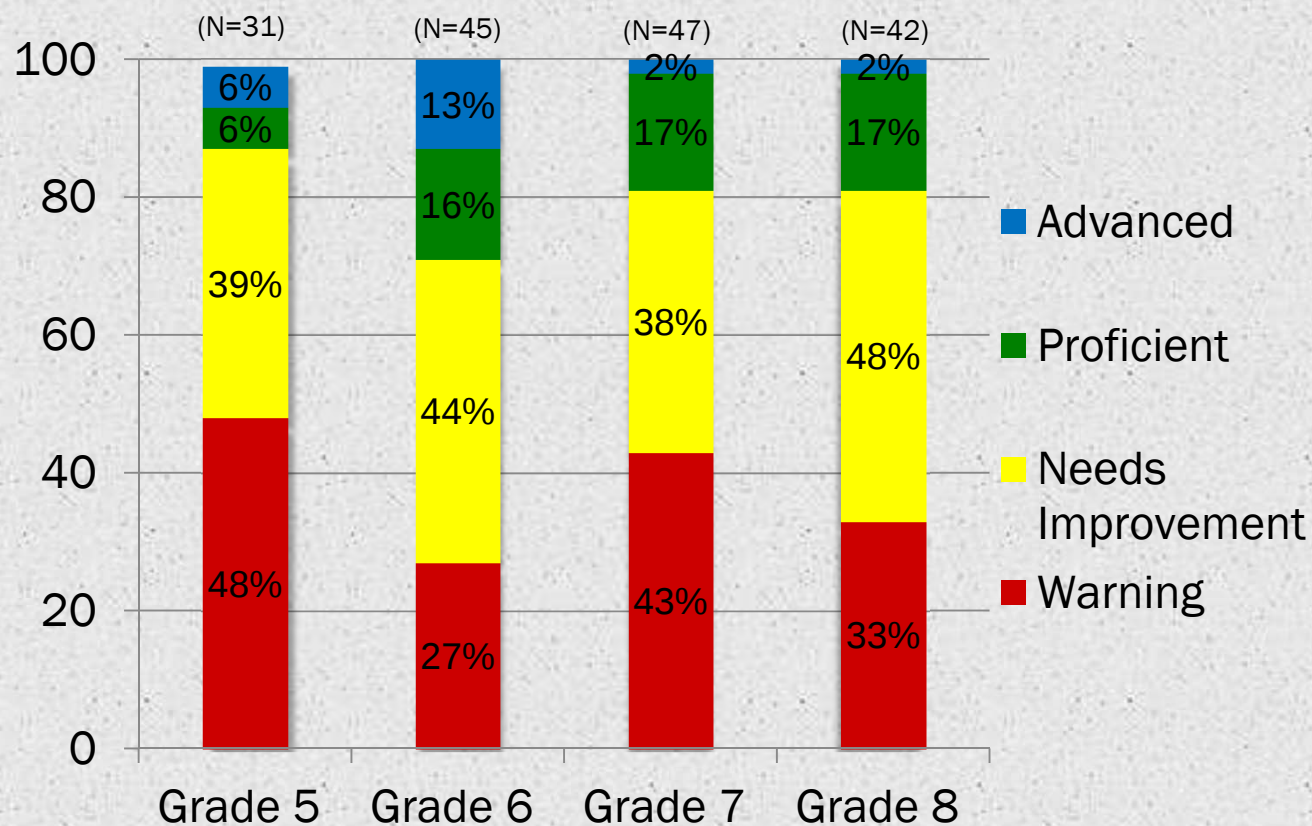
Grades 5-8





Grades 5-8

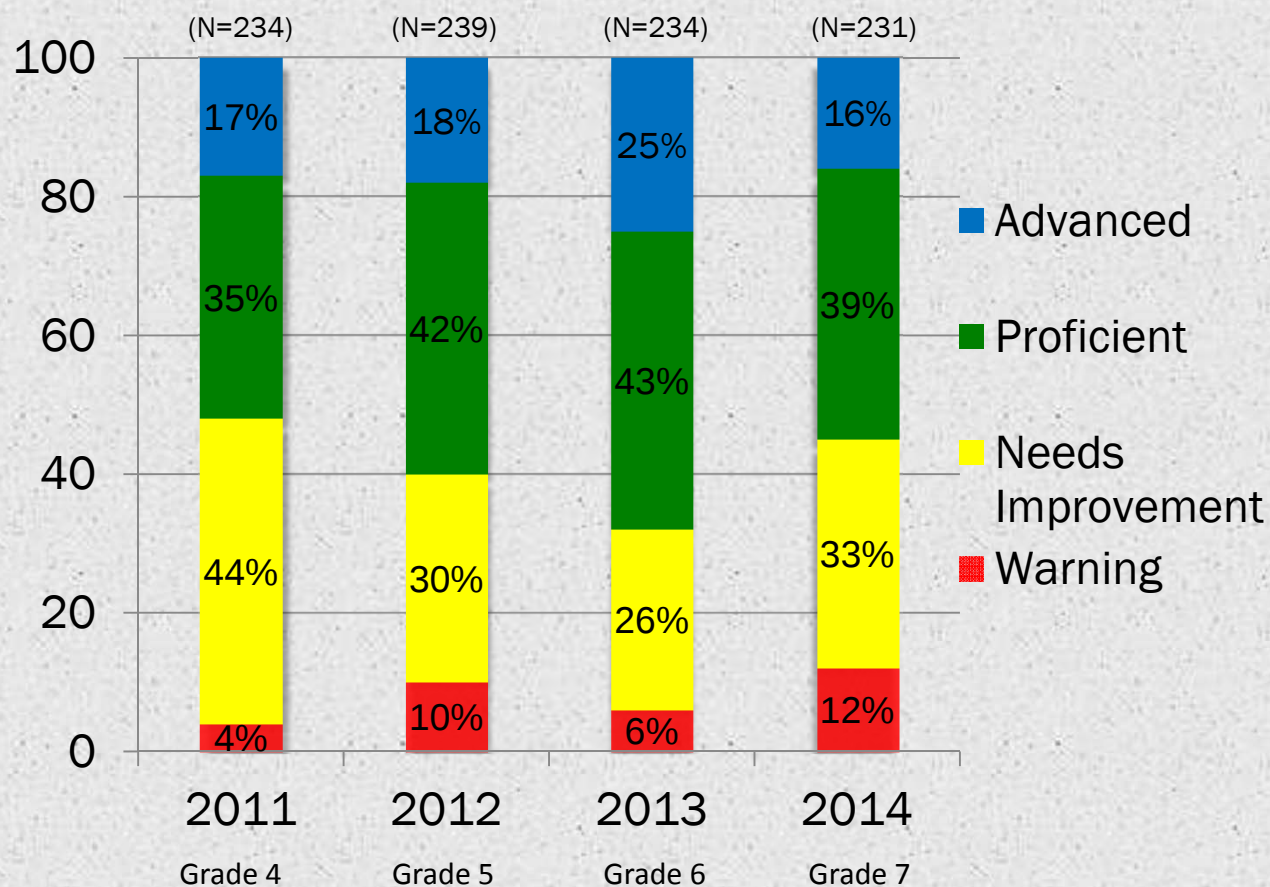
Students with Disabilities





Current Grade 8 Cohort

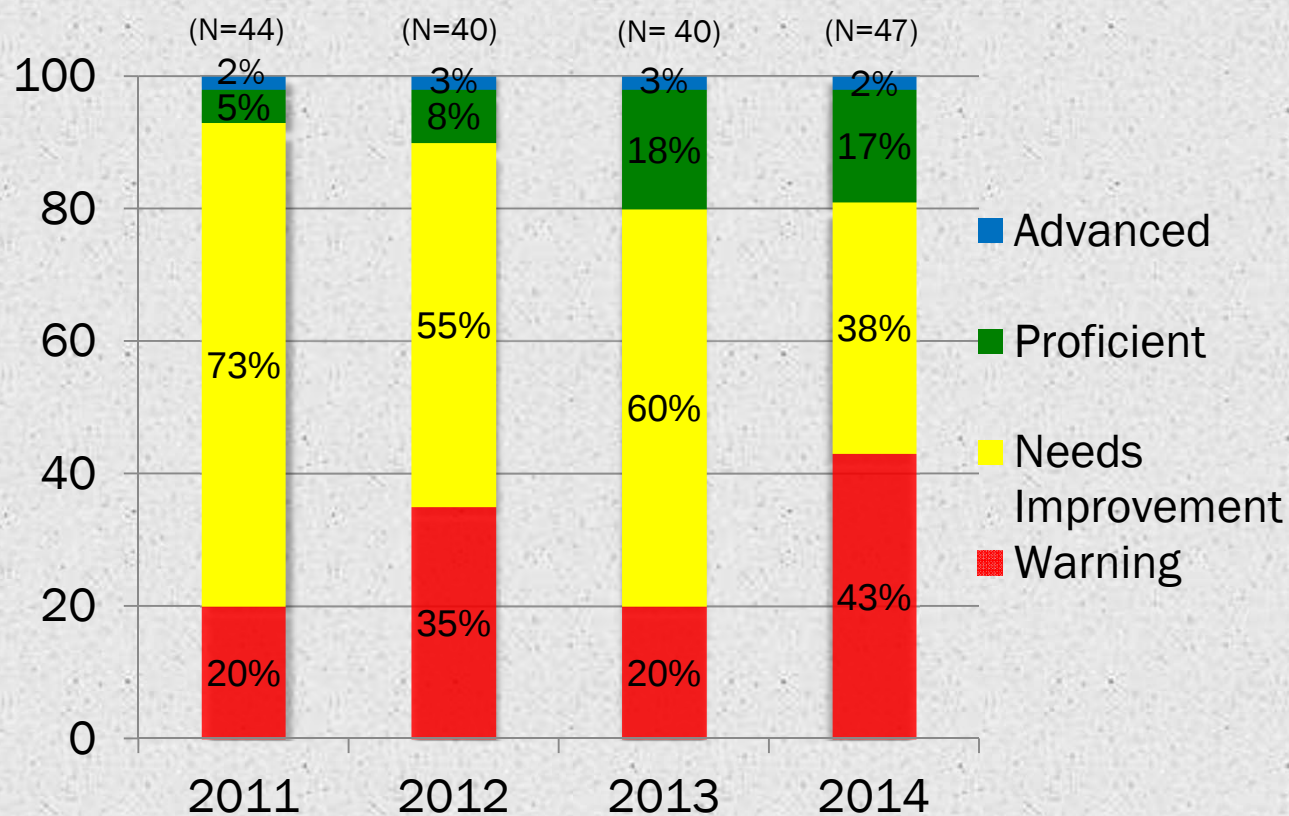
(Same group of student's performance over time)





Current Grade 8 Cohort Students with Disabilities

(Same group of student's performance over time)





MCAS



Shifts of the Common Core



Next Generation Assessment
(PARCC)



What do we need to do to ensure that our students are college and career ready?

(Major Shifts)

We need:

Focus: A strong emphasis and concentration of efforts on fewer topics. High priority areas based on identified standards taught for mastery building a strong mathematical foundation.

Coherence: To build new understanding upon foundations constructed in previous years. Each standard is not a new event, but an extension of previous learning. Planning and experiences must align across grades and link to major topics within grades.

Rigor: To develop students' deep, authentic command of mathematical concepts.

Developing students' proficiency of concepts involves:

- Conceptual understanding
- Procedural skill and fluency
- Application (*all with equal intensity)



Major, Supporting, and Additional Clusters

- Not all of the content in a given grade is emphasized equally in the standards.
- Some clusters require greater emphasis based on depth of ideas, the time they take to master, and or the importance to future mathematics or the demands of college & career readiness.
- This intense focus on the most critical material at each grade allows depth in learning which is carried out through the Standards of Mathematical Practice.



Strengths and Challenges

Aligned to Major Cluster Standards

Strengths:

- **Operations and Algebraic Thinking Grade 3**
Hanover (85%) vs. State (80%)
- **Numbers and Operations - Base 10 Grade 4 & 5**
Hanover (83%) vs. State (80%)
Hanover (86%) vs. State (79%)
- **Ratios and Proportional Relationships Grade 6**
Hanover (79%) vs. State (73%)
- **Expressions and Equations Grade 7**
Hanover (81%) vs. State (74%)
- **Geometry Grade 8**
Hanover (78%) vs. State (72%)

Challenges:

- **Number and Operations-Fractions Grades 3 & 4**
Hanover (73%) vs. State (67%)
Hanover (62%) vs. State (58%)
- **Operations and Algebraic Thinking Grade 5**
Hanover (68%) vs. State (61%)
- **Statistics and Probability Grade 6**
Hanover (67%) vs. State (60%)
- **The Number System Grade 7**
Hanover (63%) vs. State (60%)
- **Statistics and Probability Grade 8**
Hanover (67%) vs. State (62%)

4th Grade: Use the four operations with whole number to solve problems (4.OA.2-3)



MCAS Sample

- 14 Corn muffins cost \$2 each. Blueberry muffins cost \$3 each.
- Which of the following equations can be used to find m , the total cost in dollars of 8 corn muffins and 7 blueberry muffins?

- A. $(2 + 3) \times (8 + 7) = m$
- B. $(2 \times 3) + (8 \times 7) = m$
- C. $(2 + 8) \times (3 + 7) = m$
- D. $(2 \times 8) + (3 \times 7) = m$

PARCC Sample

Four teachers offer an after-school chess club. The table shows the number of students who joined.

Grade	Number of Students
Third	12
Fourth	36
Fifth	9

Part A

The teachers will divide the total group of students who joined into teams of **no more than** 6 students.

What is the **least** number of teams that will include all of the students?

Enter your answer in the box.

teams

Part B

The chess club started with 18 chess sets. The teachers ordered 3 cases of 15 chess sets. They will divide the total number of chess sets so that each teacher receives an equal number. Then they will give any extra sets to the school library.

What is the **greatest** number of chess sets each of the 4 teachers should get?

Enter your answer in the box.

chess sets



6th Grade: Apply and extend previous understandings of multiplication and division to divide fractions by fractions

(6.NS.1)

MCAS Sample

Which of the following is equivalent to the expression below?

$$3\frac{2}{3} \div \frac{2}{3}$$

- A. $5\frac{1}{2}$
- B. 4
- C. 3
- D. $2\frac{4}{9}$

PARCC Sample

Joanne buys a rug with an area of $\frac{35}{4}$ square meters. The length of the rug is $\frac{7}{2}$ meters.

What is the width, in meters, of the rug?

Enter your answer in the space provided. Enter **only** your fraction.



Performance Expectations

If our strategic actions are implemented successfully.....

Our students will:

- Receive targeted instruction in a comprehensive Response to Intervention (RTI) model enhanced and supported by well developed data teams: 2015
- Receive tiered instruction during the Middle School academic support block: 2015
- Successfully transition to the Partnership for Assessment of Readiness for College and Careers (PARCC) assessment: April/May 2015
- Demonstrate measurable growth (determined by Student Growth Percentile scale) related to our priority areas under the Common Core State Standards (CCSS) key elements: 2015 PARCC Exam
- Demonstrate mastery of grade level standards as determined by performance levels on the Next Generation Assessment: 2015 PARCC Exam

Our staff will:

- Be able to articulate the key features under the shifts of CCSS: 2015
- Participate in peer coaching and observation on a regular basis: 2015
- Engage in teacher led Professional Learning Community (PLCs) and vertical meetings ensuring reflective collaboration related to student achievement: 2015
- Facilitate and/or engage in Professional Development opportunities supporting student's conceptual understanding, ability to apply mathematics to real-world issues and think creatively: 2015
- Successfully transition to the PARCC assessment: 2015



Strategic Actions/Benchmarks for Improvement

2014-2015

- **Math pilot**
- **Decide math program best suited to the needs of our students and community**
- **Community forums**
- **Vision 2020 sustainable funding**
- **Evaluate hardware and software needs**
- Deconstruction of math standards
- Professional development (PD)- Common Core State Standards
- PLC training for admin/faculty

2015-2016

- **PD supporting the new math program**
- **Response to Intervention (RTI) model in math**
- **Math assessment plan**
- Peer-to-peer observation and instructional rounds
- Teacher leadership of PLCs
- Develop teacher leaders and maximize PD
- Establish PLC priority topics
- Maximize schedules to ensure additional opportunities for math intervention

