ACHIEVE THE CORE

# Why the Common Core?: How these Standards are Different

# *Why are we doing this? We have had standards.*

Before Common Core State Standards we had standards, but rarely did we have **standards-based instruction**.

- ✓ Long lists of broad, vague statements
- ✓ Mysterious assessments
- ✓ Coverage mentality
- ✓ Focused on teacher behaviors – “the inputs”

# Results

Previous state standards did not improve student achievement.

- ✓ Gaps in achievement
- ✓ Gaps in expectations
- ✓ NAEP results
- ✓ ACT 2012 data – College Readiness Benchmark

| | |
|---|---|
| All 4 subject areas: | **25%** |
| 3 subject areas: | **15%** |
| 2 subject areas: | **17%** |
| 1 subject area: | **15%** |
| None | **28%** |

- ✓ College remediation rates

# What are our expectations?

Based on the beliefs that

- A quality education is a key factor in providing all children with opportunities for their future

- It is not enough to simply complete school, or receive a credential – students need critical knowledge and skills

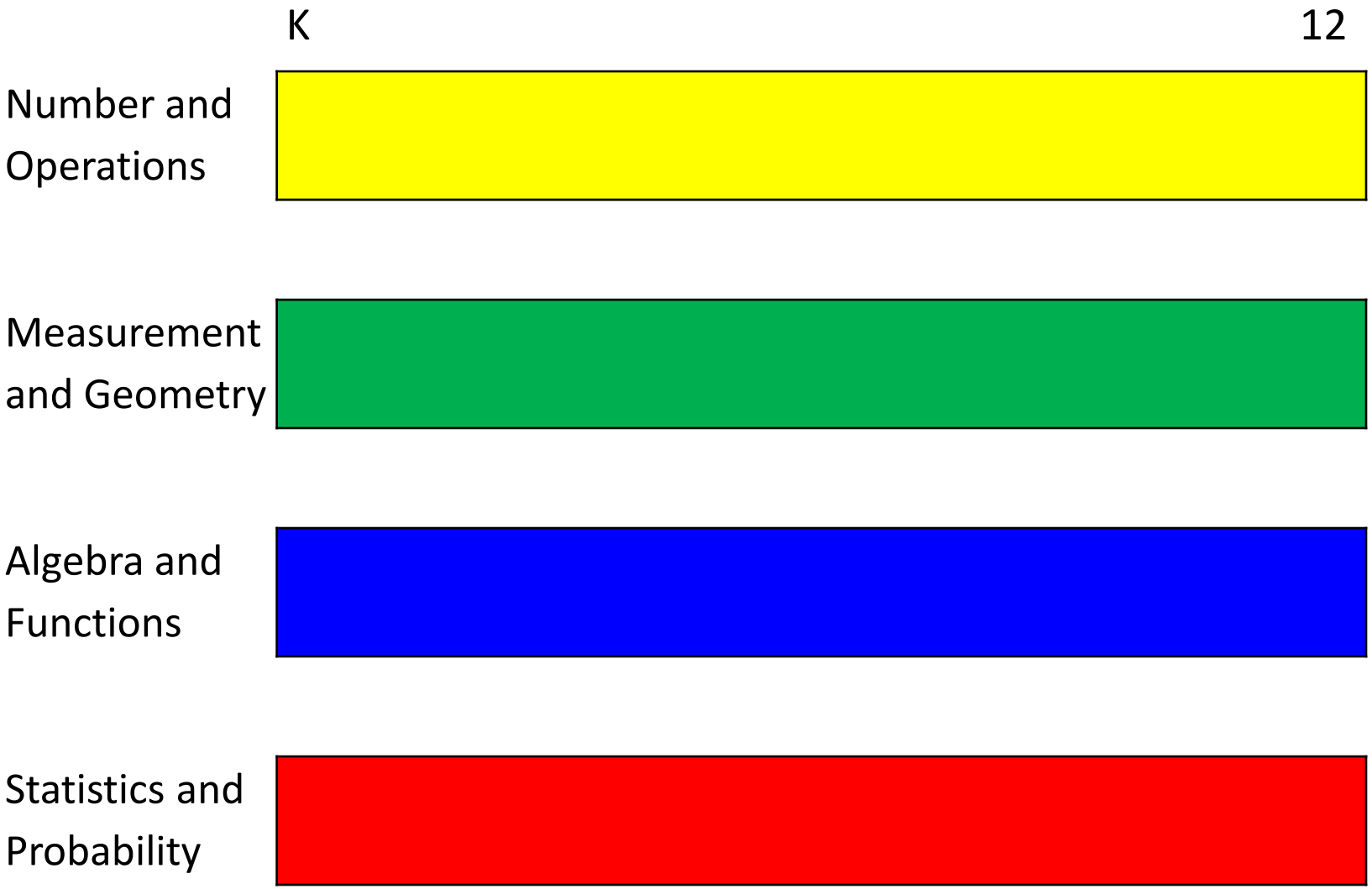
- This is not a 12th grade or high school issue. It is an education system issue.

**Quality implementation of the Common Core State Standards is a necessary condition for providing all students with the opportunities to be successful after high school.**

# Mathematics:  3 shifts

1. **Focus:** Focus strongly where the Standards focus.

# Traditional U.S. Approach



# Priorities in Mathematics

| Grade | Focus Areas in Support of Rich Instruction and Expectations of Fluency and Conceptual Understanding |
|---|---|
| K–2 | Addition and subtraction, measurement using whole number quantities |
| 3–5 | Multiplication and division of whole numbers and fractions |
| 6 | Ratios and proportional reasoning; early expressions and equations |
| 7 | Ratios and proportional reasoning; arithmetic of rational numbers |
| 8 | Linear algebra and linear functions |

# Mathematics:  3 shifts

1. **Focus:**  Focus strongly where the Standards focus.

2. **Coherence**: **Think** across grades, and **link** to major topics with grades.

# **Coherence**: Link to major topics within grades

*Example: data representation*

Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. *For example, draw a bar graph in which each square in the bar graph might represent 5 pets.*

Standard 3.MD.3

# Mathematics:  3 shifts

1. **Focus:**  Focus strongly where the Standards focus.

2. **Coherence**: **Think** across grades, and **link** to major topics within grades.

3. **Rigor:** In major topics, pursue **conceptual understanding,** procedural skill and **fluency,** and **application**.

# Required Fluencies in K-6

| Grade | Standard | Required Fluency |
|---|---|---|
| K | K.OA.5 | Add/subtract within 5 |
| 1 | 1.OA.6 | Add/subtract within 10 |
| 2 | 2.OA.2<br>2.NBT.5 | Add/subtract within 20 (know single-digit sums from memory)<br>Add/subtract within 100 |
| 3 | 3.OA.7<br>3.NBT.2 | Multiply/divide within 100 (know single-digit products from memory)<br>Add/subtract within 1000 |
| 4 | 4.NBT.4 | Add/subtract within 1,000,000 |
| 5 | 5.NBT.5 | Multi-digit multiplication |
| 6 | 6.NS.2,3 | Multi-digit division<br>Multi-digit decimal operations |

# Mathematical Practices

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

# Mathematics at MHS

2012-14

All teachers received training:

- Math Standards and Shifts
- Standards of Mathematical Practices
- Math Talks
- *Expressions*

2014-15

All teachers will receive continued training on Expressions

All teachers will receive an introduction to Cognitive Guided Instruction (CGI)

Twelve teachers at MHS will receive training on CGI