Let Me Learn at My Level of Readiness
The Rise of Personalized
Competency Based Learning

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The Age of Learning, Ideas, and Innovation

- New ideas and discoveries

- The opportunity to share ideas

- An age of innovation and opportunity for those who **love to learn, have good learning skills, self-management skills, and the ability to collaborate with others**

What a time to be a learner!

But this opportunity to be a successful learner is not available to all our children

Schools are failing to serve as an equalizer which gives opportunity to all

What if we could create a system that is purposefully designed to help all students to be successful learners?

- Understand why our existing system of education is not build to effectively help all kids to learn

- Consider a much better model for learning, that is absolutely familiar to everyone in this room

- Choose to seize the opportunity to be the change-makers who build a system that allows **all our kids** to participate in the age of learning

The Curriculum-Driven System Consistently Performs in Exactly the Manner It Was Designed

Standardized One-Size-Fits-All Curriculum-Based Education

Cover → **Test** → **Sort**

- **Cover** standardized content for each grade or course
- **Test** students after each unit of instruction
- **Sort** students by grades into different levels of success
- **Move on** to the next unit of instruction

School Reform Accomplishments

- **Non-viable lists of state content expectations**
- **Non-viable lists of federal content expectations**
- **High stakes testing**
- **Rigid pacing guides/ one size fits all**
- **CCSS/GLCE references in lesson plans**
- **CCSS/GLCEs posted daily in the classroom**
- **High frequency district assessments**
- **Less time for play, music, art, nature, recess!**
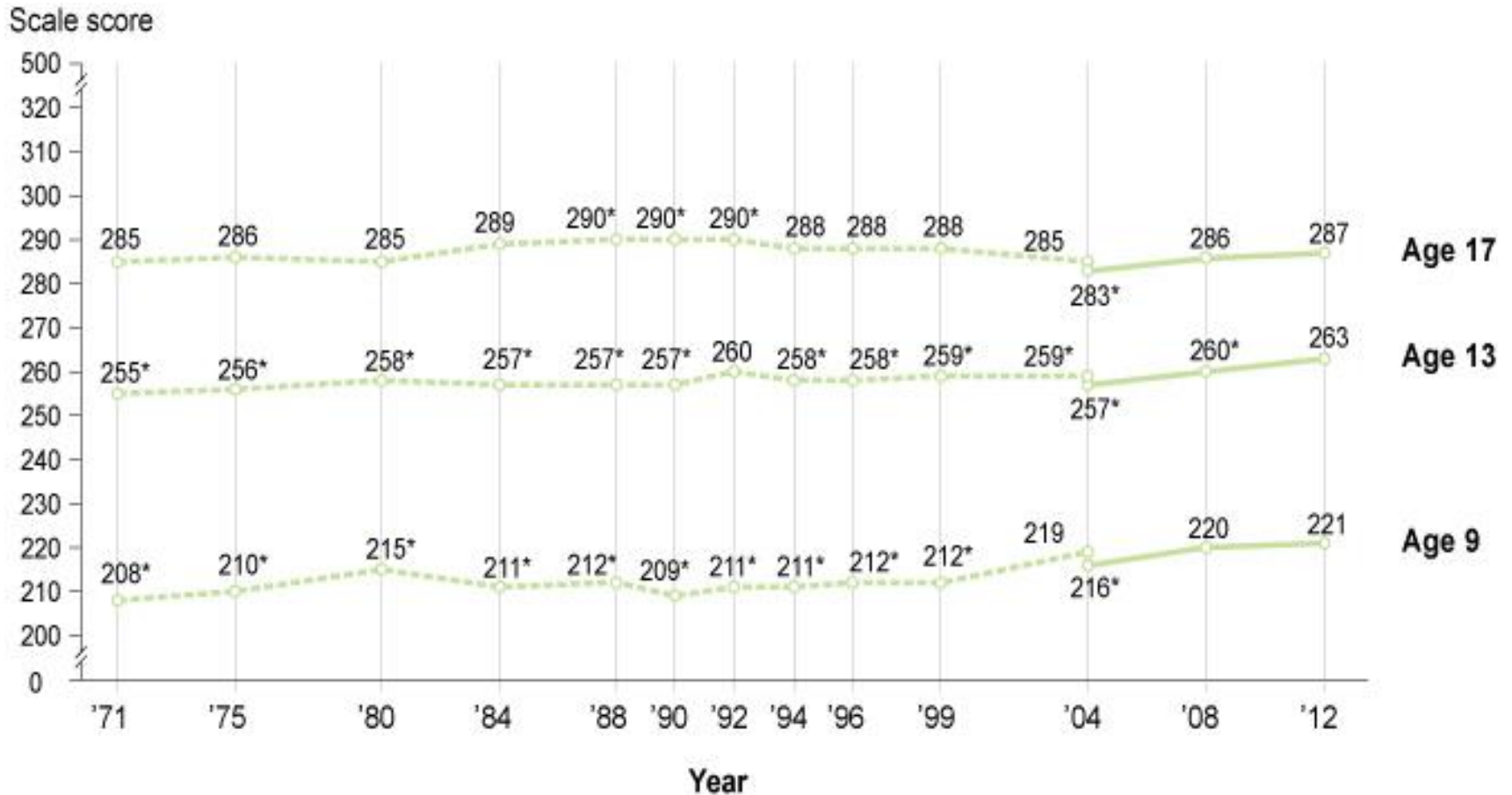- **Educator stress**
- **Student stress**

The Politics of School Reform

- **A Nation at Risk**

- **Goals 2000**

- **No Child Left Behind**

- **CCSS**

- **PARCC and Smarter Balance**

- **Race to the Top**

- **School Improvement Grants**

Decades of School Reform

NAEP Long Term Reading Trends, Average Scaled Scores
Source: NAEP, *The Nation's Report Card: Trends in Academic Progress*, 2012

* Significantly different (*p* < .05) from 2012.

Decades of School Reform

NAEP Long Term Math Trends, Average Scaled Scores
Source: National Assessment of Educational Progress, *Trends in Academic Progress*, 2012
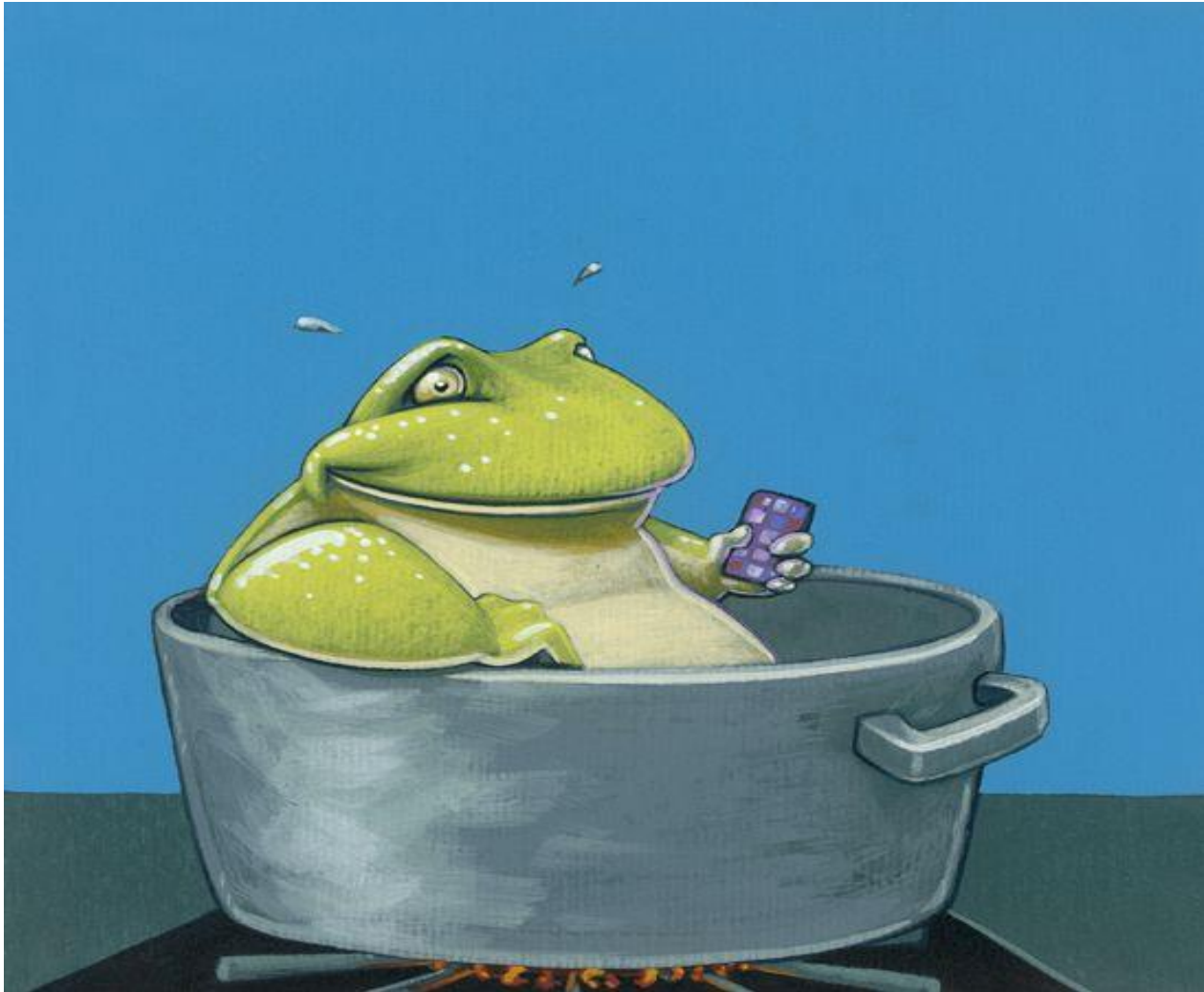
Decades of School Reform
PISA International Testing

US PISA Results in Mathematics, Reading, & Science 2000 - 2012
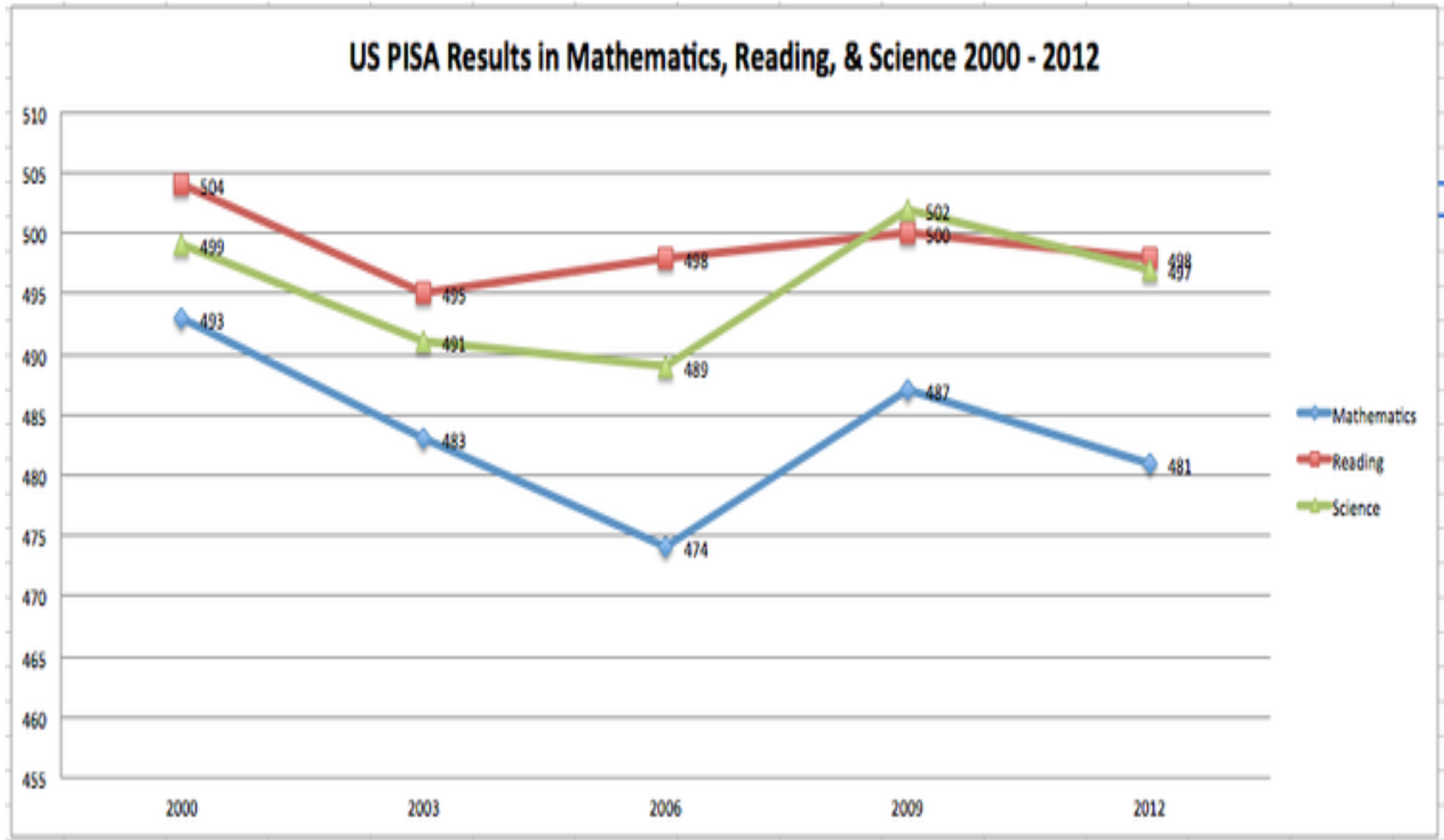
Cooked and Happy

Decades of School Reform

OECD Programme for International Assessment of Adult Competencies

The PIAAC (2014) assessed millennials (16 to 34) for literacy, numeracy and problem solving skills, in 22 OECD nations.

In literacy, US millennials scored lower than 15 other nations. In both numeracy and problem solving, US millennials were tied for last.

One-Size-Fits-All Curriculum Driven Instruction **Devours Vulnerable Children**

Is Curriculum-Driven Instruction Working?

66% of American children are scoring below proficient reading levels at the beginning of 4th grade on the National Assessment of Educational Progress reading test.
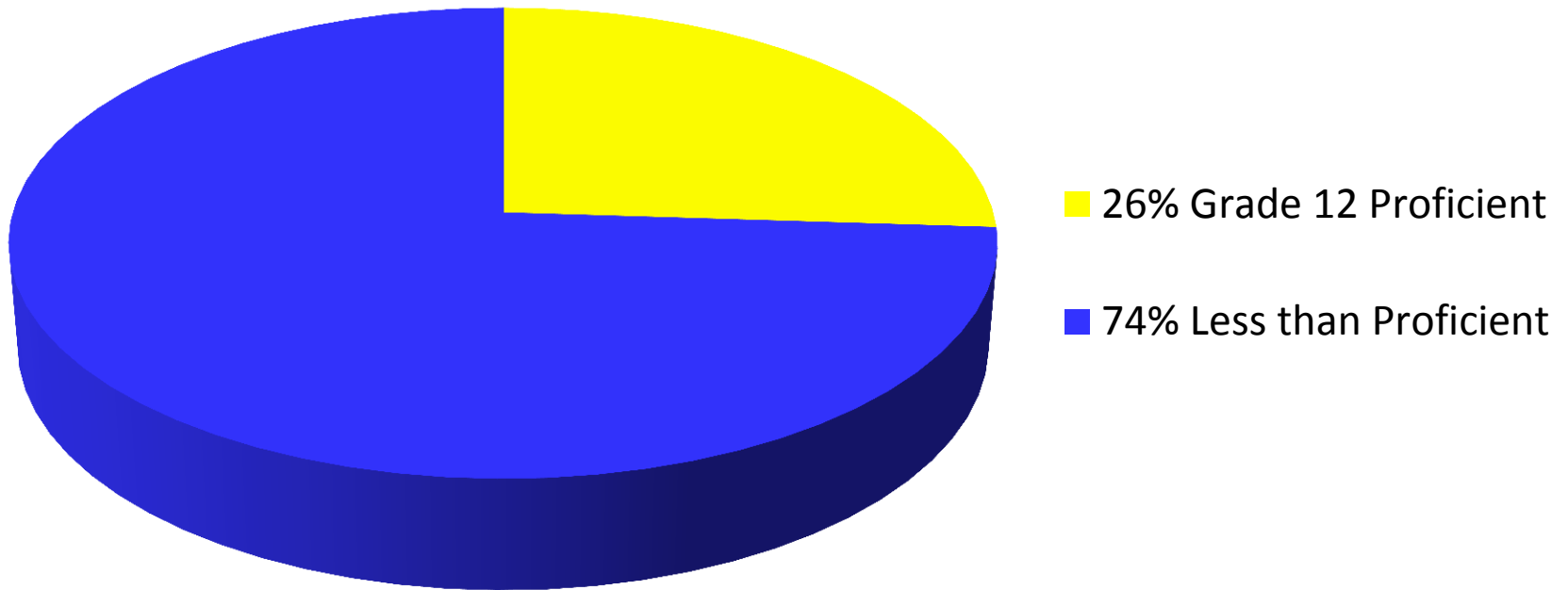
(Annie E. Casey Foundation, 2013).

Is Curriculum-Driven Instruction Working?

- **80% of fourth graders from poor families have reading skills below the proficient level (Hernandez, 2011).**
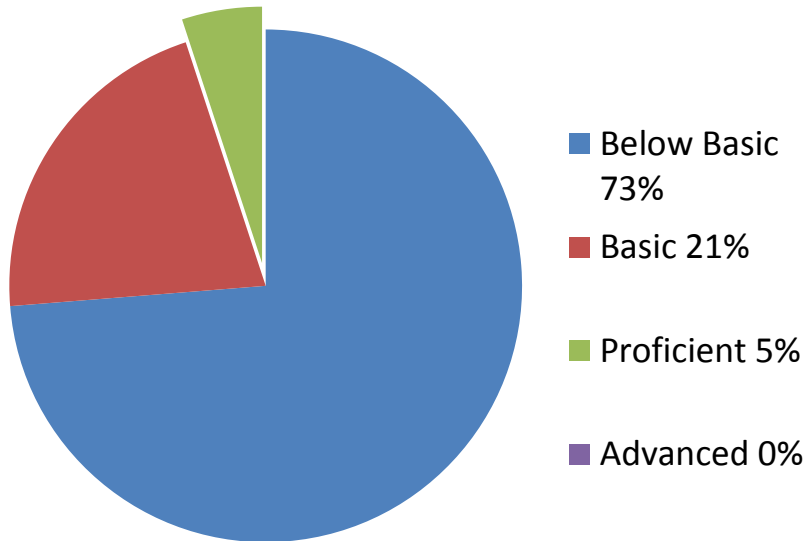
NAEP Math Proficiency
(Grade 12), 2013

26% Grade 12 Proficient

74% Less than Proficient

NAEP Math Proficiency
for African American Students
(Grade 12), 2013

- 7% Grade 12 Proficient
- 93% Less than Proficient
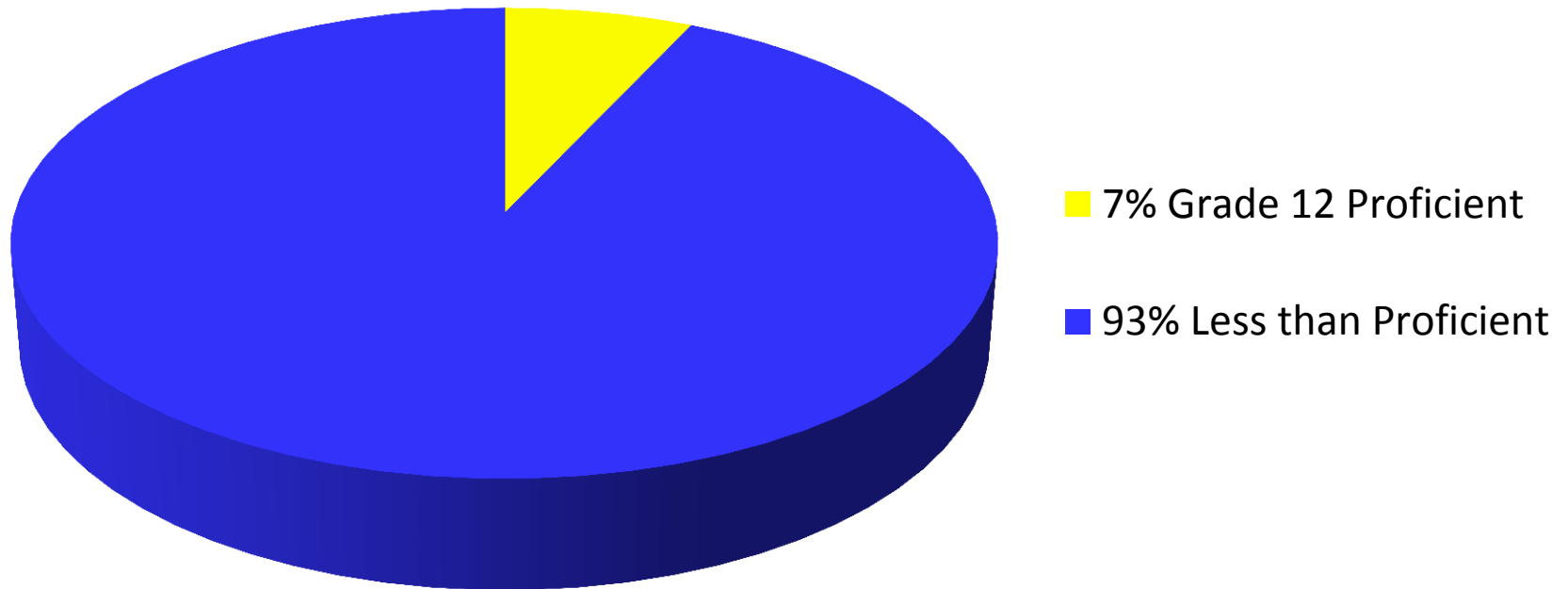
Decades of School Reform

Detroit Fourth Grade NAEP Rates of Reading Proficiency, 2015

- Below Basic 73%
- Basic 21%
- Proficient 5%
- Advanced 0%

Detroit Fourth Grade NAEP Rates of Math Proficiency, 2015

- Below Basic 64%
- Basic 31%
- Proficient 4%
- Advanced 0%
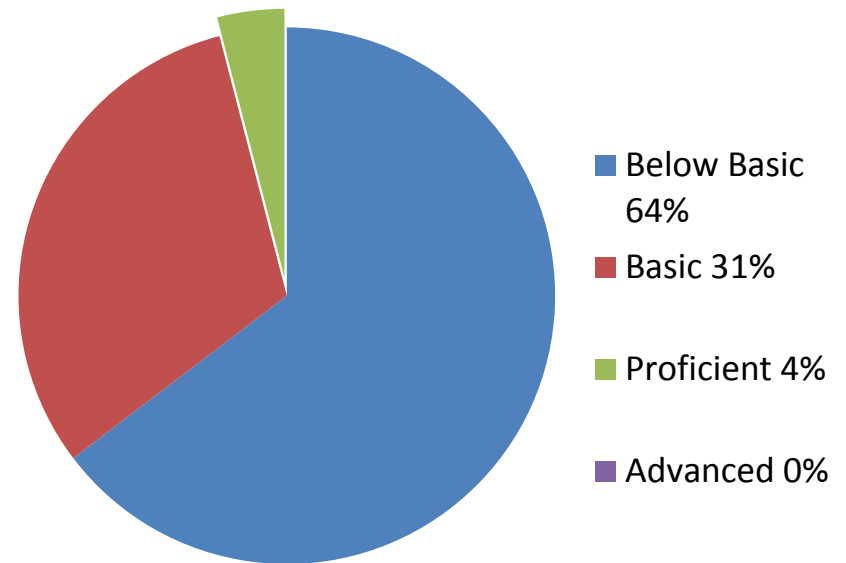
Decades of School Reform

% of N.Y. Students Proficient in ELA Across All Grades, 3-8	2015	2016
NYC	30.4	38
Buffalo	11.9	16.4
Rochester	4.7	6.7
Syracuse	8.1	10.9
Yonkers	20.3	26

% of N.Y. Students Proficient in Math Across All Grades 3-8	2015	2016
NYC	35.2	36.4
Buffalo	15.1	16.1
Rochester	7.4	7.2
Syracuse	9.4	10.4
Yonkers	24	24.6

Blame Teachers, Parents, or Students?
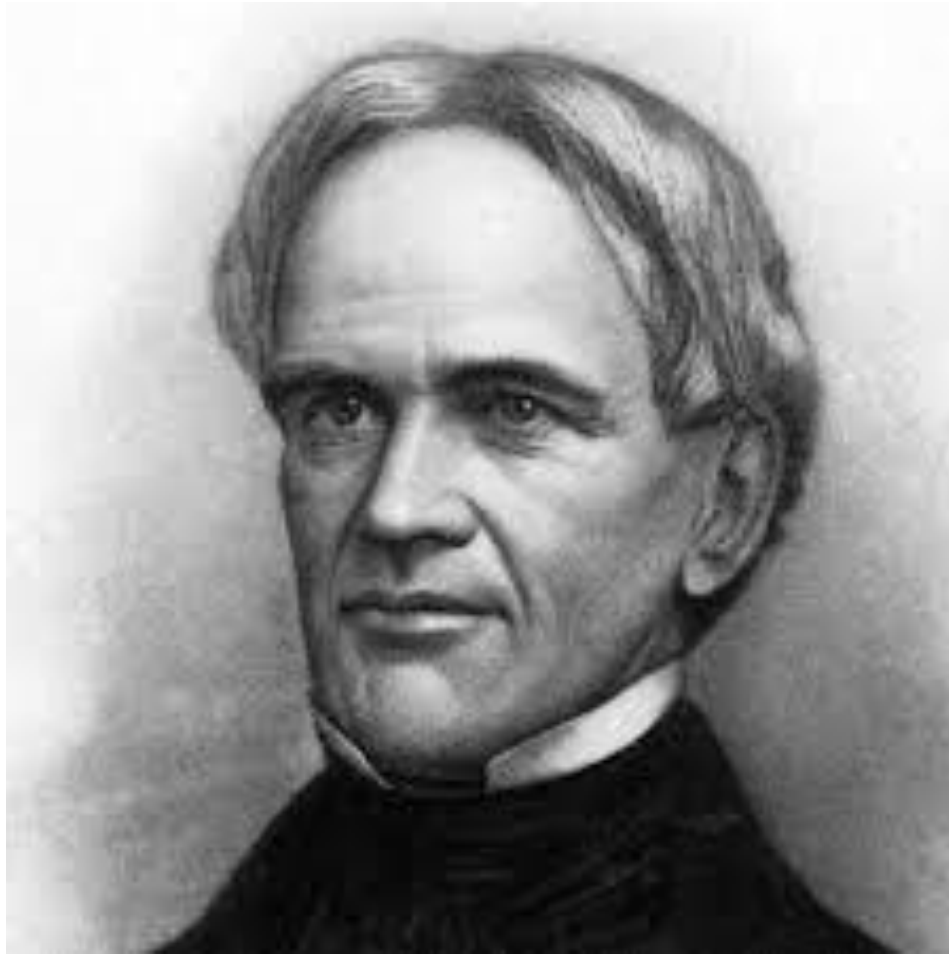
The Opportunity to Build a Learning System for the 21st Century

Our Moment of Opportunity

- Identify clear concise learning goals along a pathway to higher level skills
- Teachers and students know exactly where they are on the skill development continuum
- Personalized instruction gives students what they need at their optimal level of challenge
- Teachers carefully monitor progress and adapt instruction as needed to maximize student learning
- Students advance upon demonstrated mastery

Our Moment of Opportunity

- No more sitting through lessons already learned/ No more struggling with impossible lessons

- Students maintain a growth mindset

- Assessment is meaningful, and contributes to student ownership of their own learning

- Students are offered choice in how they learn

- Learning is joyful, and never a race

Personalized Competency Based Learning

Competency Based Learning in Action

Assess Student Learning Readiness

Informed Instruction

Ongoing Systematic Measurement of Progress

Identify Essential Learning Outcomes

Competency

Systems Architecture

Curriculum-Driven

1. Use a standardized one-size-fits-all curriculum
2. Deliver instruction at the same pace for all
3. Test students after each unit of instruction
4. Sort students by grade into levels of success
5. Move forward with the delivery of standardized instruction whether students are ready or not

Competency Based

1. Identify clear learning outcomes
2. Assess student readiness for learning
3. Offer instruction at each student's level of readiness
4. Monitor progress and adapt instruction as needed
5. Give all the time and support needed to develop competency in any essential skill

It is already happening

Personalized Instruction/Competency Based K-12 Learning

- New Hampshire, 2010
- Maine
- 30 other states

Early Learning Foundation uses a simple competency framework in PK to Grade 3

Western Governor's, Capella, online programs

Dozens of other Universities

Khan Academy and other Digital Learning Options

Global Learning XPRIZE founded by Elon Musk

- RoboTutor: software to learn basic math and reading independently/ Carnegie Mellon
- Literacy Education and Math Lab: Learning through play labs in or out of school/ Columbia

It is already happening
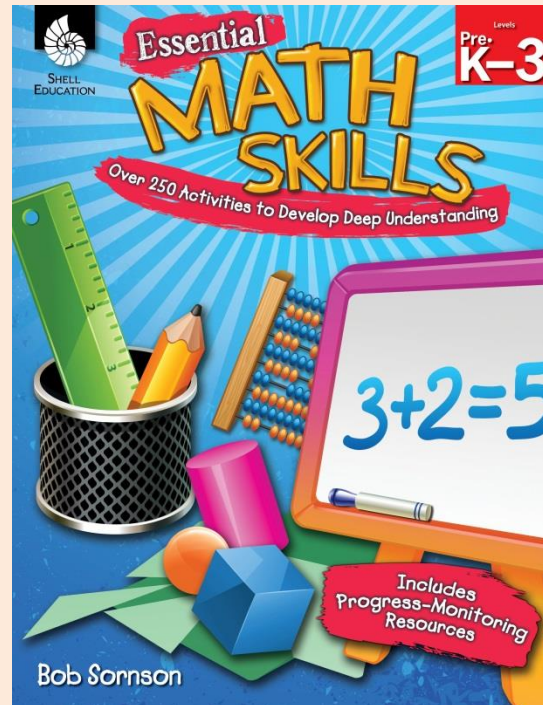
Essential Math Skills, Pre-K to Grade 3

The Essential Math Skills Inventory

Shell Education

Essential Number Concepts, Kindergarten

(K) Demonstrates counting to 100

(K) Has one-to-one correspondence for numbers 1-30

(K) Understands combinations (to 10)

(K) Recognizes number groups without counting (2-10)

Essential Skill Inventories

The Pre-K to Grade 3 Inventories are a **competency framework** for the essential skills that are the foundation for learning success

- **Growth mindset**
- **Whole child**
- **Personalized student centered instruction**

Preschool Essential Skills

Oral Language

Listens with interest to stories

Retells stories using main ideas

Expresses needs and wants verbally

Uses words to solve problems

Uses age-appropriate vocabulary

Follows two-part oral directions

Literacy

Shows an interest in books and print

Understands basic concepts of print

Identifies if sounds are the same or different

Recognizes basic rhyming words

Identifies basic shapes

Recognizes and prints first name

Identifies uppercase letters in first name

Identifies some letters and the sounds they make

Number Sense

Counts by rote to 20

Recognizes numerals 0 to 10

Counts using 1 to 1 correspondence for numbers (to 10)

Models gross motor and fine motor patterns

Understands concepts of add-on and take-away (to 10)

Preschool Essential Skills

Visual Motor Skills

Uses coloring and writing tools with skill

Can draw a picture to express an idea

Demonstrates appropriate cutting skills

Uses proper pencil grip

Prints name in own style

Gives sustained effort to visual-motor tasks

Gross Motor Skills

Throws and catches a large ball

Throws and catches a small ball

Stands on one foot with eyes open

Hops on two feet

Hops on one foot

Demonstrates ability to cross midline

Behavior

Separates from parents/caregivers without excessive upset

Plays/shares with others

Waits his/her turn

Perseveres to complete a task

Respects classroom rules and procedures

Demonstrates good listening skills

Self-Care

Can use the bathroom independently and complete hygiene tasks

Able to dress self (puts on coat and shoes; fastens snaps, buttons and zippers)

States full name and age

Kindergarten Essential Skills

Shapes

- Identifies basic shapes
- Draws basic shapes

Visual

- Uses hands and eyes at nearpoint
- Maintains visual focus at nearpoint

Letters

- Identifies uppercase letters
- Identifies lowercase letters

Phonologic Skills

- Identifies if sounds are the same or different
- Identifies rhyming words
- Produces rhymes for a given word
- Identifies beginning or ending sounds of words
- Blends given sounds into words
- Segments words into sounds
- Listens with interest to stories
- Identifies a letter sound associated with each letter

Language

- Asks questions when appropriate
- Follows 2-part oral directions
- Uses age-appropriate vocabulary
- Uses language to solve problems

Motor Skills

- Demonstrates throwing and catching skills with a small ball
- Can balance on one foot with eyes closed for 6 seconds
- Skips well for at least 10 yards

Literacy

- Understands concepts of print
- Recognizes personally meaningful sight words
- Prints 10-20 personally meaningful words
- Uses letter-sound knowledge to write words
- Prints full name

Numeracy

- Demonstrates counting to 100
- Has one-to-one correspondence for numbers 1-30
- Understands combinations (to 10)
- Recognizes number groups without counting (2-10)

Behavior

- Perseveres to achieve a task
- Respects basic rules/procedures in the classroom

First Grade Essential Skills

Letters
- Identifies uppercase letters
- Identifies lowercase letters

Phonologic Skills
- Produces rhymes for a given word
- Identifies beginning, middle and ending sounds of words
- Combines phonemes to make words

Language
- Identifies a letter sound associated with each letter
- Produces rhymes for a given word
- Identifies beginning, middle and ending sounds of words
- Combines phonemes to make words

Motor Skills
- Demonstrates appropriate balance
- Demonstrates appropriate skipping
- Uses comfortable nearpoint vision

Visualization
- Draws pictures with detail
- Can tell/retell a story

Literacy
- Recognizes basic sight words
- Follows print when reading (visual tracking)
- Decodes grade-appropriate print
- Reads short sentences
- Reads for meaning
- Prints 30-50 personally meaningful words
- Expresses ideas in writing (simple sentences)
- Spells using common word patterns
- Spells words using visual memory

Numeracy
- Counts objects with accuracy to 100
- Replicates visual patterns or movement patterns
- Recognizes number groups without counting (2-10)
- Understands concepts of add on or take away (to 30) with manipulatives
- Can add or subtract single digit problems on paper
- Shows a group of objects by number (to 100)

Behavior
- Delays gratification when necessary
- Plays well with others
- Shows interest in learning

Second Grade Essential Skills

Reading
- Uses phonics knowledge to decode words in context
- Recognizes basic sight words
- Reads with fluency
- Reads for pleasure
- Identifies story elements
- Identifies main ideas
- Makes text-to-text connections
- Makes text-to-self connections
- Makes inferences when reading

Visual Memory
- Spells using visual memory
- Can remember 3-block visual patterns

Language
- Uses age-appropriate vocabulary
- Demonstrates effective listening skills
- Uses language to recognize feelings in self and others

Writing
- Prints neatly
- Writes in full sentences

- Spells using phonics skills
- Makes simple revisions to a draft
- Writes using rich detail

Motor Skills
- Demonstrates excellent balance and skipping

Mathematics
- Quickly recognizes number groups (to 100)
- Can show a group of objects by number (to 100)
- Can add-on or take-away from a group of objects (to 100)
- Can add or subtract double digit problems on paper
- Counts by 2, 3, 4, 5, and 10 using manipulatives
- Solves written and oral story problems using the correct operations
- Understands/identifies place value to 1,000

Behavior
- Demonstrates empathy for fellow students
- Shows interest in learning

Third Grade Essential Skills

Reading

- Uses phonics knowledge to decode words in context
- Recognizes basic sight words
- Reads with fluency
- Reads for pleasure
- Identifies story elements using reading strategies
- Identifies main ideas
- Monitors comprehension while reading
- Makes inferences when reading
- Makes text-to-text, self, world connections

Language

- Uses age-appropriate vocabulary
- Demonstrates effective listening skills
- Uses language to recognize feelings in self and others

Writing

- Prints neatly and writes neatly in cursive
- Spells using visual memory
- Spells using phonics skills and word patterns
- Uses capitalization and punctuation
- Writes a paragraph using full sentences

- Expresses a clear opinion in oral and written form
- Edits and revises drafts

Mathematics

- Reads and writes numbers to 10,000 in words and numerals
- Uses common units of measurement: Length, weight, time, money, temperature
- Can add or subtract three digit problems on paper with regrouping
- Can round numbers to the 10s
- Can round numbers to the 100s
- Add and subtract 2 digit numbers mentally
- Counts by 5,6,7,8,9,10 using manipulatives
- Uses arrays to visually depict multiplication
- Recognizes basic fractions
- Solves written and oral story problems using the correct operation

Behavior

- Shows interest in learning
- Demonstrates empathy for fellow students

Organization

- Organizes to complete a task in school
- Organizes to complete a task at home

Systematic Measurement of Progress

Essential Skills Class Inventory for **Kindergarten** Indicate mastery by writing the date to the right of the student's name under the skill mastered.

More Reasons

Learning reading and math the way it was done 100 years ago is not going to prepare anyone for the future.

Up to 70 percent of the tasks in most jobs are on track to be automated, leaving only the most creative, empathetic, technically fluent, collaborative work for humans.

Schools Can Serve All Our Students

Start with Clear Learning Goals, then Give Kids the Instruction They Need at Their Level of Readiness for as Long as They Need It
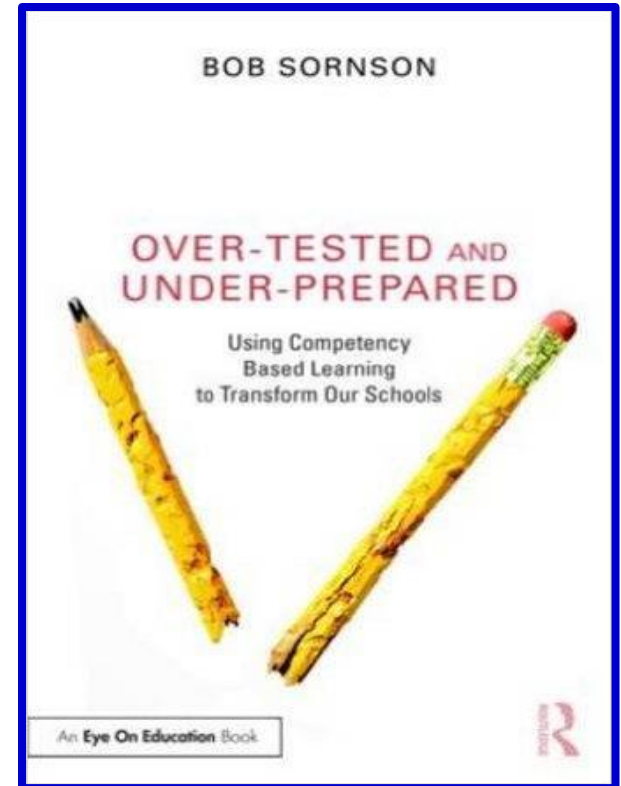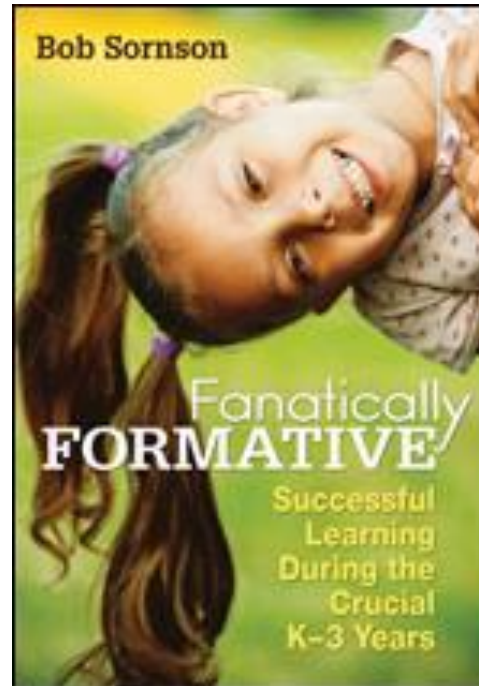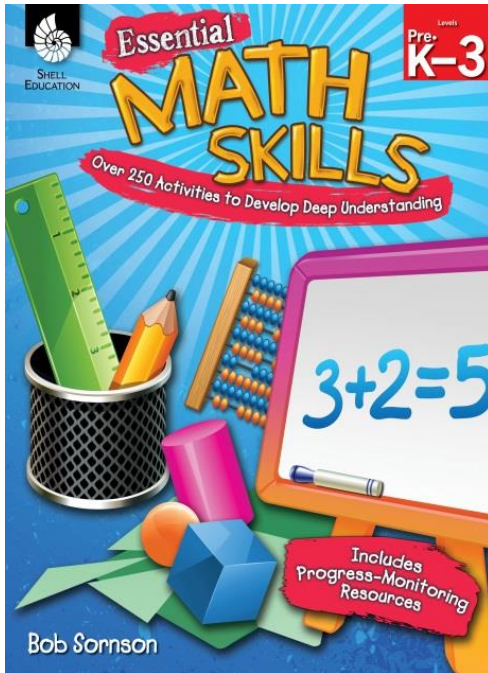
Leadership
We Need You

Competency Based Learning

Do You Want to Learn More about Competency Based Learning?

The Essential Skill Inventories

Preschool and K-3

License to use the ESI is without cost for schools with a training and data collection plan

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Important Learning Outcomes

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