

Accelerate Learning

with SMART Goals

for Students and Staff

Tuesday, April 20, 2010

Donna Davis,
National Mathematics Consultant, NSF Specialist



School Education Group

Elaine Carman, Director
Mathematics Curriculum and Standards





Balloon - a - r a m e



School Education Group



CollegeBoard
inspiring minds™

ASSESSORS

- Come to the front of the room, pick up 2 direction sheets, a Task Card and Assessors' Eyes Only
- Task Card for Assessors' Eyes Only
- Pick up a package of materials
- Return to group
- Place material on table
- Do Not share "For your eyes only"
- Wait for signal to begin

OBSERVERS

- Obtain Observer's Sheet
- Record observations of your group during the activity
- Answer the questions on the Observer's Sheet

Task card

Setting Expectations

Balloon Assembly

- The group's job is to assemble balloons. Each balloon must be blown up. It must have a string tied to it. All team members must participate.

Task Card

Setting Expectations

- Assessor's job- determine whether or not the product is acceptable. The Assessor will not give verbal feedback.
- Observer's job- watch the members of the group and record answers to the questions on the observation sheet.

OBSERVER

- Share with your small group what you were observing and your findings

- 3-5 minutes



School Education Group



GROUP SHARING

- At your tables, participants in the balloon assembly please share feelings you identified during the task.
- What interfered with peak performance?

What was our goal in this exercise?

- Were the expectations clear enough to complete the task successfully?
Why or why not?
- How did the task evolve?
- How could we have efficiently set our goal?

How do you produce desired results?

The journey NYC took

Goal: To provide the same quality mathematics education for ALL students based upon adoption of a common core that was nationally validated.



School Education Group



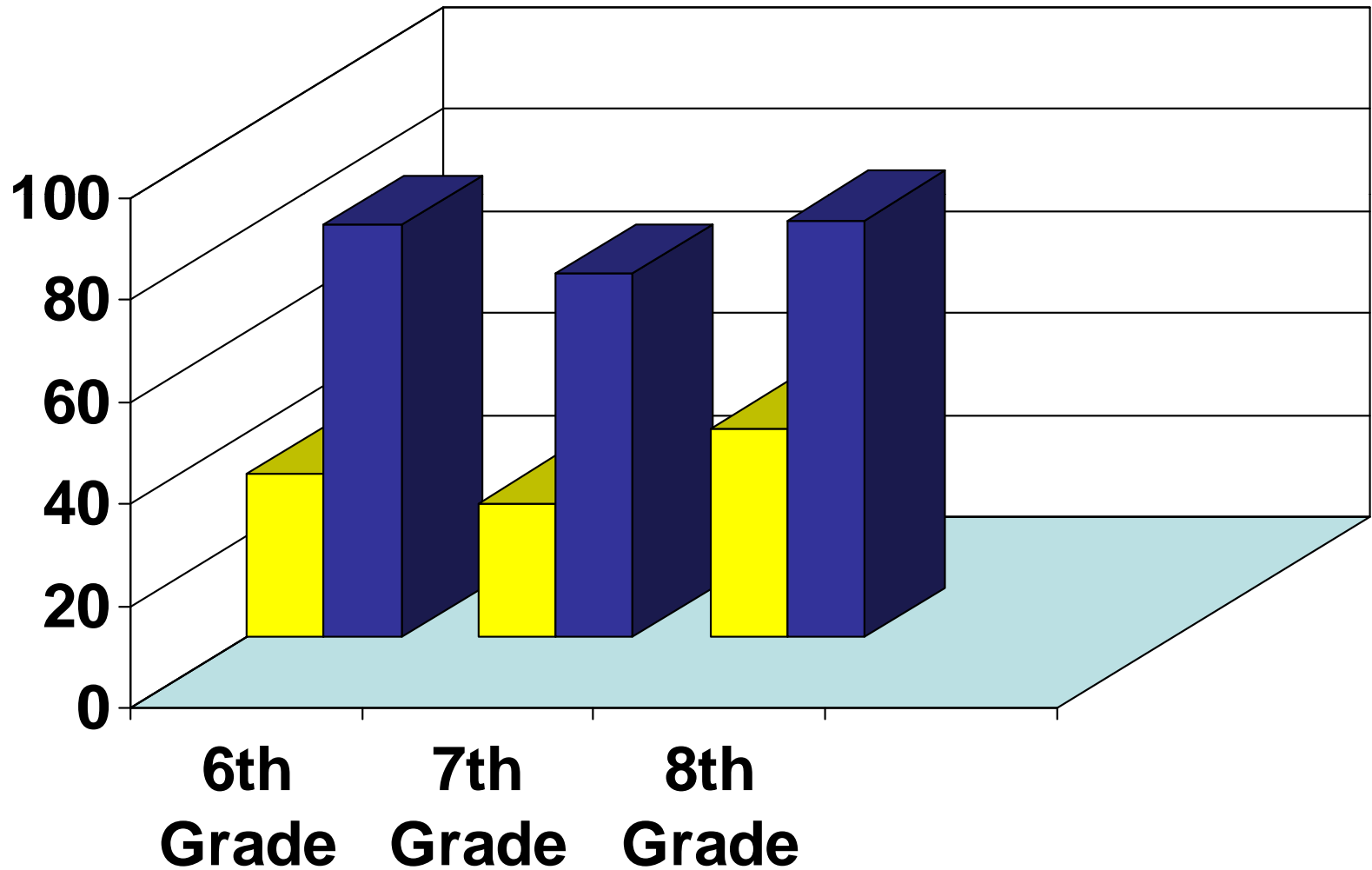
Successful implementation of the Core Curriculum

Key components

- ❖ Organization of Regions
- ❖ The RIS Model
- ❖ Utilization of pacing guides
- ❖ Mandated minutes for Professional Development
- ❖ Use of the Inclusion Model
- ❖ Uniform Assessments
- ❖ Adoption of Best Practices

Impact Results in NYC 2009

percent of students meeting or exceeding state standards



From THE
NEW YORK
POST on
Sept 19, 2007

CITY SCHOOLS AT HEAD OF THE CLASS

DEEMED THE MOST IMPROVED IN NATION

By CHARLES HURT and YOAV GOIEN

September 19, 2007

WASHINGTON - The New York City school system won the nation's top prize in public education yesterday for greatest improvement in urban teaching.

The award - which U.S. Education Secretary Margaret Spellings called the Oscars of public education - comes with \$500,000 in college scholarships for New York high-school graduates. "If it can be done in New York City, it can be done anywhere," said Eli Broad, who with his wife established the Broad Foundation to spur innovations and improvements in large city schools.

Schools Chancellor Joel



Greater Refinement of the Process

- The institution of quality reviews and school report card
- Better use of assessment
 - Interim
 - Diagnostic / Prescriptive
 - In-depth analysis of data
 - Enhanced reporting systems
 - Creation of the Inquiry Team
- Introduction of SMART Goals

How do you produce desired results?

- Setting goals that are SMART goals

SMART GOALS

- A goal is something that you expect to achieve sometime in the near future.
- SMART goals provide the *focus*.
- SMART goals serve to define exactly what the “resultant state” looks like and how it will be measured.
- SMART goals help others understand how their work *aligns* and relates to the focus of the school.

What are SMART Goals?

- **S**pecific, strategic, significant
- **M**easurable, meaningful
- **A**ttainable, agreed upon
- **R**elevant, realistic, reasonable
- **T**imely, tangible

How are SMART Goals used in NYC Public Schools?

- Inquiry teams
 - Goal: become expert in using data to identify a change in instructional practice that will accelerate learning for a specific group of students in the school building
 - Based upon study and review, teams work with school staff to implement and monitor system-level change to benefit all students.
 - Shift school culture to support continual, evidence-based improvement of student learning.

The Purpose of the Inquiry Team

- Every school has a sphere of success - a group of students for whom current practices are working.
- No matter how effective a school is, not every child is within its sphere of success.
- To bring more children into that sphere, a team has to learn to do something differently.

What Inquiry Team Members Do...

- They examine the practices that are not working for particular children to make strategic change.
- Then they evaluate the impact of that change to use what was learned to experiment with system-level modifications to bring more students into the sphere of success.

An example:

School XM123	Grade 8	Mathematics	NYState	Exam- 2009
	Item #	%Correct	Question Type	Strand
Highest ten	22	93%	Multiple Choice	Measurement
	25	91%	Multiple Choice	Measurement
	18	88%	Multiple Choice	Measurement
	2	86%	Multiple Choice	Geometry
	11	86%	Multiple Choice	Algebra
	24	85%	Multiple Choice	Geometry
	1	84%	Multiple Choice	Algebra
	5	80%	Multiple Choice	Geometry
	28	81%	Short response	Geometry
	13	79%	Multiple Choice	Geometry

School XM123	Grade 8	Mathematics	NYState	Exam- 2009
	Item #	%Correct	Question Type	Strand
Lowest ten	39	49%	Short response	Geometry
	41	47%	Short response	Geometry
	44	47%	Extended Response	Number Sense and Operations
	30	46%	Short response	Algebra
	10	43%	Multiple Choice	Algebra
	16	41%	Multiple Choice	Algebra
	38	37%	Short response	Algebra
	32	36%	Extended Response	Algebra
	45	33%	Extended Response	Algebra
	23	32%	Multiple Choice	Geometry

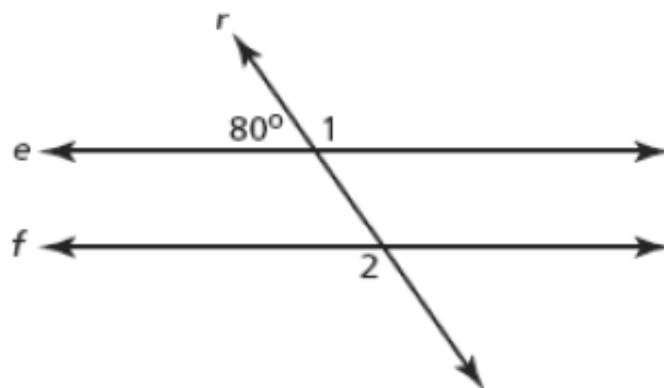
2009 – Grade 8 - NYS Math Exam
Item #23

Strand: Geometry

Performance Indicator: 8.G05 Calculate the missing angle measurements when given two parallel lines cut by a transversal

Points: 1

In the diagram below, line e and line f are parallel, and line r is a transversal.



[not drawn to scale]

What is the sum of the measures of $\angle 1$ and $\angle 2$?

- A** 100°
- B** 160°
- C** 180°
- D** 200°

Common Core Standard:

7.G.8: Justify facts about the angle sum of triangles, exterior angles and alternate interior angles created when parallel lines are cut by a transversal

College Board:

MII 2.2.2: Identifies, states and applies the basic properties associated with complementary angles and angles formed by transversals intersecting pairs of parallel lines.



2009 – Grade 8 - NYS Math Exam Item #45

Strand: Algebra

Performance Indicator: 7.A04 Solve multi-step equations by combining like terms, using the distributive property, or moving variables to one side of the equation

Points: 3

What is the solution of the equation below?

$$4(x + 5) = x + 8$$

Show your work.

Answer $x =$ _____

Common Core Standard

8.EE.2: Solve linear equations with rational number coefficients, including equations that require expanding expressions using the distributive law and collecting like terms.

College Board:

MII.6.2.2: Solves linear equations with rational number coefficients using mental graphical, and symbolic methods with and without technology.



2009 – Grade 8 - NYS Math Exam

Item #32

Strand: Algebra

Performance Indicator: 7.A04 Solve multi-step equations by combining like terms, using the distributive property, or moving variables to one side of the equation

Points: 3

Solve the equation below for p .

$$3(p + 6) = 5p + 4$$

Show your work.



2009 – Grade 8 - NYS Math Exam Item #38

Strand: Algebra

Performance Indicator: 8.A07 Add and subtract polynomials (integer coefficients)

Points: 2

Simplify the expression below.

$$(3x^2 + 4x - 3) - (2x - 1)$$

Show your work.

Common Core Standard:

7.EE.2

Generate equivalent expressions from a given expression using the laws of arithmetic and conventions of algebraic notation. Include:

- a) Adding and subtracting linear expressions
- b) Factoring
- c) Simplifying

College Board:

MI.6.1.1 Represent linear patterns generated by mathematical and real-world situations with expressions, and evaluate these expressions for nonnegative rational numbers.

2009 Grade 8 NYS Math Exam
Item # 16

What is $3m^3 + 6m^2$ divided by $3m$?

A $m^2 + 6m^2$

B $m^2 + 2m$

C $3m^2 + 6m$

D $m^3 + 2m^2$

2009 Grade 8 NYS Math Exam

Item # 10

Simplify the expression below.

$$3xy(9xy + 14x)$$

A $27xy + 42x$

B $9xy + 42x^2y$

C $27x^2y^2 + 14x$

D $27x^2y^2 + 42x^2y$



2009 – Grade 8 - NYS Math Exam Item #21

Strand: Algebra

Performance Indicator: 8.A09 Divide a polynomial by a monomial (integer coefficients)

Points: 1

Simplify the expression below.

$$\frac{3x^6 + 9x^4 - 6x^2}{3x^2}$$

- A $x^4 + 3x^2 - 2$
- B $x^4 + 6x^2 + 3$
- C $x^3 + 3x^2 - 3x$
- D $x^3 + 6x^2 + 3x$

Performance Indicator: 7.A02 Add and subtract monomials with exponents of one.

- Which expression is equivalent to $14a - 4a + 5a - 3a$?
 - A. $2a$
 - B. $8a$
 - C. $12a$
 - D. $20a$

After reviewing the data...

How do we set SMART Goals?

We begin by answering the following questions:

Why:

Who:

What:

When:

How:



School Education Group



Now we set goals...

- **S**pecific, strategic, significant- Do you know exactly what you want to do?
- **M**easurable, meaningful- Are you able to assess your progress?
- **A**ttainable, agreed upon- Is your goal within your reach, given your current situation?
- **R**elevant, realistic, reasonable-Is your goal relevant toward your purpose?
- **T**imely, tangible- What is the deadline for completing this goal?

Now we set goals...

- **S**pecific, strategic, significant - Do you know exactly what you want to do?
- **M**easurable, meaningful - Are you able to assess your progress?

Now we set goals...

- **A**ttainable, agreed upon - Is your goal within your reach, given your current situation?
- **R**elevant, realistic, reasonable- Is your goal relevant toward your purpose?

Now we set goals...

- **Timely, tangible - What is the deadline for completing this goal?**

Improve this goal

- **Every student will show evidence of one year of growth in mathematics each year in attendance.**

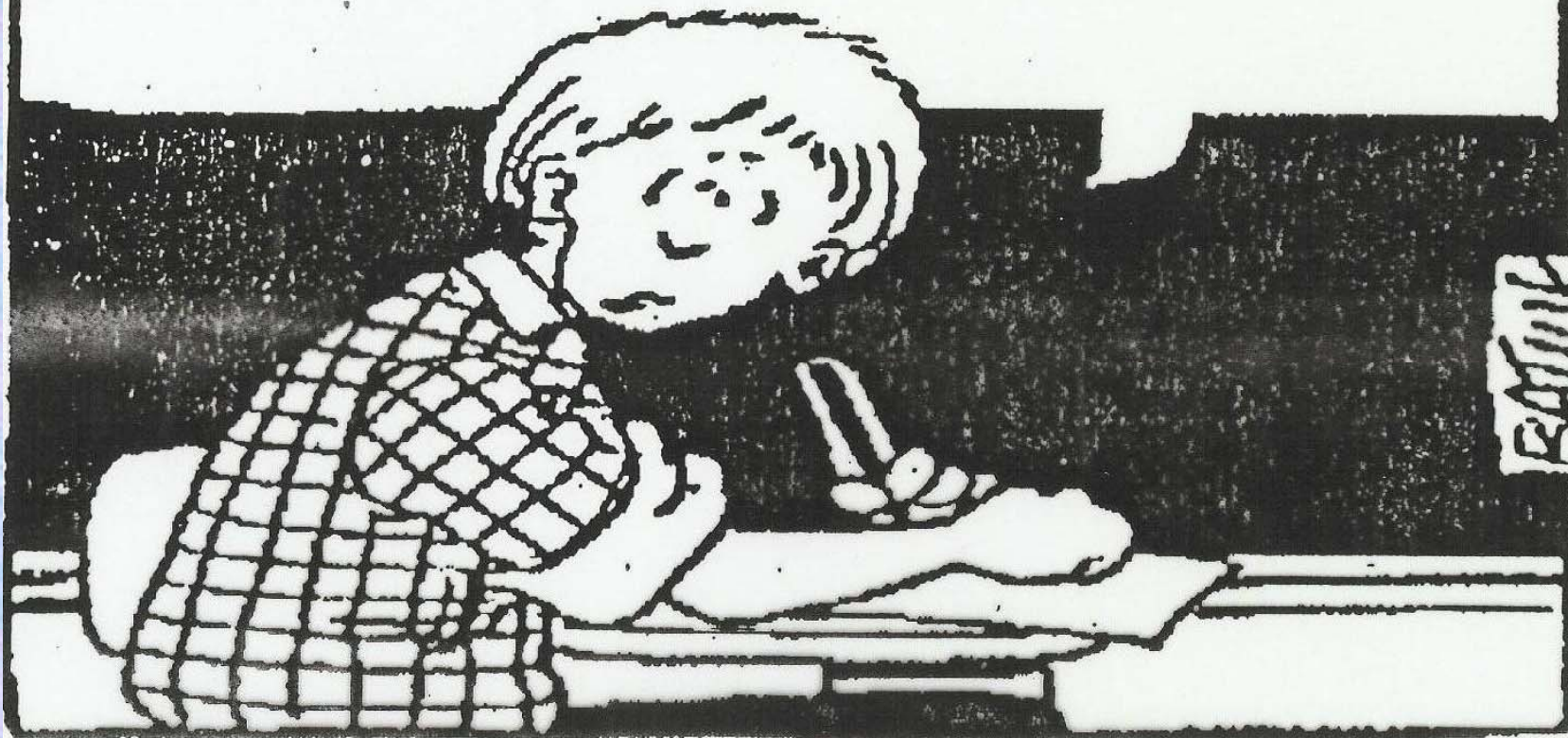
Your turn

- Look at the Assessment Problems - set SMART Goal(s) to improve instruction.

Discussion

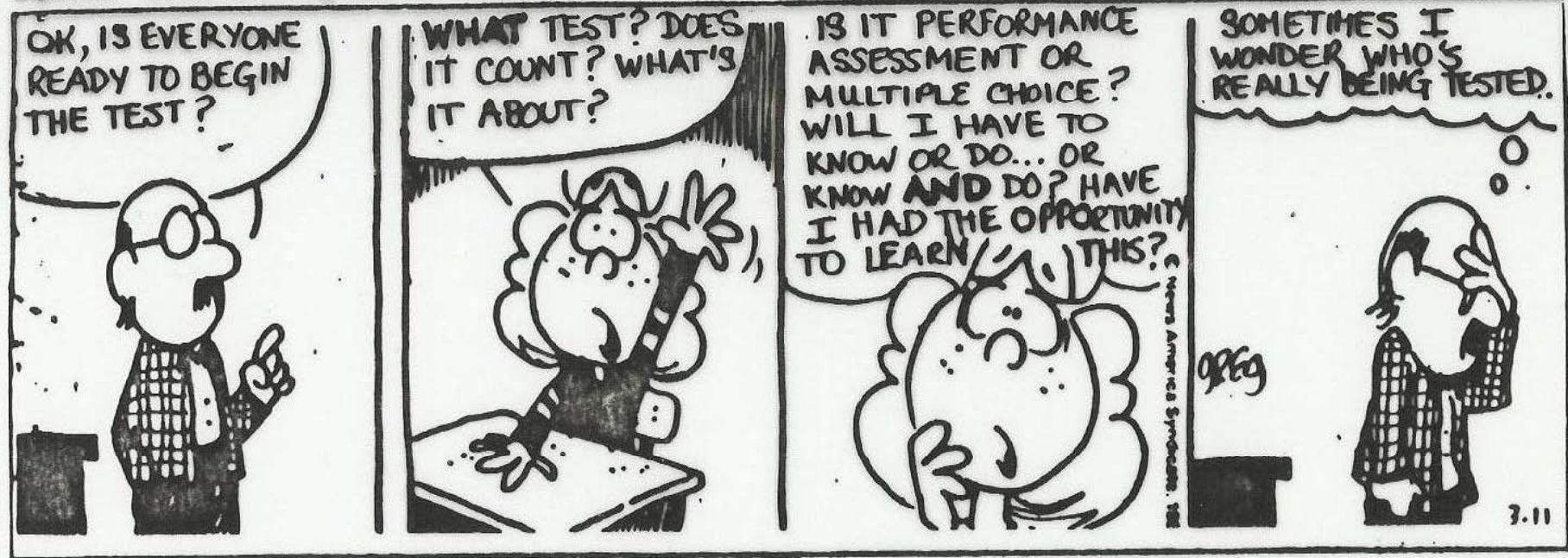
SMART Goals are good for the students...

THERE ARE A LOT OF THINGS IN LIFE I DON'T UNDERSTAND ... AND THEY ALL ENDED UP ON THIS MATH TEST ...



SMART Goals are good for the teachers...

LUANN GREG EVANS / WITH APOLOGIES FOR ADAPTATION



Writing SMART Goals

- Your turn

Discussion

Reference Information:

- New York State Standards:
www.emsc.nysed.gov/osa/math/#ei
- New York City Department of Education:
<http://schools.nyc.gov/Academics/Mathematics/EducatorResources/Item+Analyses.htm>
- College Board Standards:
<http://professionals.collegeboard.com/k-12/standards>

Contact Information

- Elaine Carman: ecarman@collegeboard.org
- Donna Davis: donna_davis@mcgraw-hill.com