The Georgia Performance Standards for K-12 Mathematics

Accelerated Mathematics I Training
May and June 2008
Overview of Day 3

- Taking the mathematics deeper
- Resources to Support GPS and Standards-based Mathematics Instruction
- Action Plans for Next Steps
Essential Question 1

How do we take the mathematics deeper?
“The comments from the students can be synthesized into three broad recommendations for modifications and changes in emphasis to existing traditional mathematics courses:

- more emphasis on *why*, instead of *how*, something is done;
- more depth, less breadth of coverage; and
- more challenge”

Mary spilled some soya sauce on her Continual Assessment Results Slip, as shown below. Part of her English and Mathematics marks cannot be seen.

<table>
<thead>
<tr>
<th>RESULTS SLIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
</tr>
<tr>
<td>Mathematics</td>
</tr>
<tr>
<td>Science</td>
</tr>
</tbody>
</table>

Her average score is 84 marks. What can be the largest difference between her English and Mathematics marks?
Why is this question different from what we usually ask?
Why does Singapore focus on this type of question?
Could we use these types of questions in our classroom?
What would they look like?
At your table write a question that you could ask about Paula’s Peaches revisited?
Share what your group wrote
Morning Break
Painted Cubes Learning Task
Lunch
Web Resources Available to Teachers

- Mathematics Curriculum Page
- Georgiamath.org
- GeorgiaStandards.org
How do you get there?

Start at:
http://www.gadoe.org
How do you get there?

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http://www.gadoe.org

Link to Mathematics Curriculum Page can be found under ‘Curriculum’
Mathematics Curriculum Page

Mathematics Program

The Georgia performance standards for mathematics have been designed to achieve a balance among concepts, skills, and problem solving. The curriculum stresses rigorous concept development, presents realistic and relevant tasks, and keeps a strong emphasis on computational skills. At all grades, the curriculum encourages students to reason mathematically, to evaluate mathematical arguments both formally and informally, to use the language of mathematics to communicate ideas and information precisely, and to make connections among mathematical topics and to other disciplines.

The implementation of this curriculum will require that mathematics classrooms at every grade be student-focused rather than teacher-focused. Working individually or collaboratively, students should be actively engaged in inquiry and discovery related to the world around them.

Research & Reports:
What can you find at the Mathematics Curriculum Page?

• Contact Information for Mathematics Team
• Research and Reports
• What’s New
• What’s Coming
• Information for Administrators
• Mathematics Information for Educators
• Support Materials
  ✓ Textbook/Instructional Materials
  ✓ Vertical Alignment Charts
What is georgiamath.org?

From
http://www.gadoe.org

Look for the
calculator!

Or go directly to:
georgiamath.org
What can you find at the georgiamath.org page?

- Introductory Video by Kathy Cox
- Comparison of QCC and GPS Course Content
- Information about learners requiring acceleration and learners requiring support
- Resources for Parents, Teachers and Educators
- General Information
- Link to GeorgiaStandards.org
What is georgiastandards.org?

Start at:
http://www.gadoe.org

Click Here!
What can you find there?

Links to Mathematics

Link to Training
Under the Mathematics Menu
Under the Mathematics Icon

Introduction to Mathematics Performance Standards
- Comparison of GCC and GPS Course Content
- Executive Summary
- Utah Frameworks
- Online Training Phase III Day 1-3-5
- GPS Training Materials
- Math Support Class
- Utah GPS – High School Research and Resource Manual
- Credit Recovery Program

Middle School Math Course Transition
- GPS Course Transition
- US Math Acceleration
- Triple School Math Remediation Resource

GPS Revisions
- Mathematics Revisions Approved on 7/13/2006

Grades K-5
- Grades K-2 Mathematics Standards
- Grades 1-3 Mathematics Standards

Grades 6-8
- Grades 6-8 Mathematics Standards

Grades 9-12
- Mathematics I: Algebra / Geometry / Statistics
- Mathematics II: Geometry / Algebra II / Statistics
- Mathematics III: Advanced Algebra / Statistics
- Mathematics IV: Pre-Calculus – Trigonometry / Statistics
- Accelerated Mathematics II: Geometry / Algebra II / Statistics
- Accelerated Mathematics III: Advanced Algebra / Geometry / Statistics
- Accelerated Mathematics III: Pre-Calculus – Trigonometry / Statistics
On the Frameworks page:

Student Editions

Teacher Editions

Log-in required for access
Logging in to Teacher Editions

If you do not have a GaDOE account, create a new account.
Also on the Frameworks page:

Webcasts

And

Podcasts
A Closer Look at the Training Menu
Math Teacher TALKS

Talking About Learning and Kids
Elluminate Sessions

- Math Teacher TALKS are a part of the Elluminate Sessions offered by GaDOE

- Elluminate Live Sessions are offered for all curriculum areas and for administrators
To Log in to an Elluminate Live Session:
To Log in to an Elluminate Live Session:

- 05/09/2008 - Kathy Politis
  Georgia Learning Connections Web Site

- 03/11/2008 - Tony Vlachakis
  GeorgiaStandards.Org Announces a Podcast Available to Teachers

- 03/18/2008 - Kathy Politis
  GeorgiaStandards.Org Proudly Partners with Verizon Thinkfinity

- 02/22/2008 - Kathy Politis
  Tell Us Your Story

View All News Items...

Georgia Standards Calendar
No events have been posted for this calendar.
Mathematics Monthly Conference Call
April 15, 2008
9:00 am

Our session will start momentarily. While you are waiting, please do the following:

Enter/edit your profile information by going to:
- Tools – Preferences – My Profile...
- Fill out the info on the "identity" tab and click "OK"
- To view the profile of another user, hover your mouse over his or her name in the participants window

Configure your microphone and speakers by going to:
- Tools – audio – audio setup wizard

Confirm your connection speed by going to:
- Tools – preferences – connection speed

We will lead the nation in improving student achievement.
More Training Available through the e-Learning Space

From here:

Scroll down and Click here
Access Recorded Elluminate Sessions

<table>
<thead>
<tr>
<th>Course categories: Mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIA Curriculum Directors - Mathematics Meeting (You may login as a Guest to view recordings.)</td>
</tr>
<tr>
<td>K-8 Mathematics TALKs - Talking About Learning and Kids (You may login as a Guest to view recordings, but you must login with a Username and Password to participate in the Discussion Forums. Return to the homepage to sign up for a Username.)</td>
</tr>
</tbody>
</table>
Discussion Forums are associated with the TALKs


Janet Davis, Program Manager, JDavis@doe.k12.ga.us

You May Need Browser Plug-in
Some documents listed below may require a Plug-in to your Internet Browser. Your Browser should have an Adobe Reader Plug-in for Adobe Reader, but if not, you may very easily download it - for FREE - from the web.

Please note: Each recorded Elluminate session starts 15 - 30 minutes before the discussion begins. You may have to experiment to find the exact beginning point.

1. Mathematics Discussion Forums

Please use the following Discussion Forums to post questions you may have about the topics discussed in the TALKs. Questions will be reviewed on a daily basis and responses provided by UCB mathematicians.

To ask a question, you must be a registered user of the eLearning Space. If you entered the TALKs by clicking on a link on the Georgia Online Learning Network, you are already a registered user. Please return to the homepage to log into the system.
Recorded TALKs and the Discussion Forums associated with them

8th Grade TALKs

January 31, 2008 - Recorded Session
- Click here for the recorded session with Janet Tomlinson (Math) and
  Elluminate password is ... math
- Printout for 8th Grade Presentation Slides (1/31/08)
- Printout of 8th Grade Session Q & A (1/31/08)

February 21, 2008 - Recorded Session
- Click here for the recorded session with Sharquinta Tuggle
  Elluminate password is ... math
- Printout for 8th Grade Presentation Slides (2/21/08)
- Printout of 8th Grade Session Q & A (2/21/08)

March 20, 2008 - to take place
Teachers Tools and Helpful Links
National Library of Virtual Manipulatives
Free Computer Graphing Tool

\[ f(x) = 3x^3 + 4x^2 - 3 \]

-10.0 < \( a \) < 10.0

\( a = 1.00 \)

x = -8.70 \( f(x) = -1675.75 \)
SciTrain
Support for Students with Disabilities

Welcome to SciTrain

Latest News

Teacher Training

Accessible Science Training
Accessible Math Training

Learn how to make your science and math classrooms more effective for students with disabilities and ADHD. SciTrain online courses are free — take them at your own pace and learn about classroom accommodations, adapted tests and laboratories, assistive technology, laws and policies and much, much more.

What is SciTrain?

SciTrain is a research initiative to train high school math and science teachers to be more effective instructors for students with disabilities. Through surveys, focus groups, and teacher evaluations, SciTrain pursues the goal of

CATEA Courses

Mobility

Evidence-Based Manual
Wheelchair Courses
Prescription & Practice

Conference 2008

Register here

SciTrain Navigation

About this Project
Science Training
Math Training
Accommodations
Publications Database
Research
Staff

Home News Events Projects Products Publications Resources About

Science and Math for All
GPS Monthly Resources

[Image of the GPS Monthly Resources website]
Find out what’s new in Math!

New Georgia Standards.Org Content
April 2008
- Teachers-As-Advisors
- English Language Arts
- Mathematics
- Social Studies
- Science
- CTAE
- Training
- Additional Information
Mathematics Resources
On-line Courses for Students

From here:

Scroll down and Click here
Welcome to GA Virtual School

Providing Options and Opportunities

- Registration for Summer 2008 and Fall 2008 - Spring 2009 is currently available to all students.
- Click here for important session dates and deadlines.
- Registration for GA DOE Credit Recovery Courses is now open.*
- Office of Technology Services offers Middle School Technology Literacy Assessment.*
- GA DOE Middle School Math Remediation Resource now available.*

*These programs are available only to public school students.
What’s ‘In the Works’?

More Teacher Editions

Professional Learning online courses

What’s missing?

What additional resources would you like to see?
Afternoon Break
Sharing, Collaborating and Team Building

- Set up systems for regular collaboration
- Implement tasks in your classes
- Begin to move to a standards-based classroom
- Encourage other teachers to try tasks
- Reflect and revise tasks
Nuggets for Team Building

- Think of ways to include the resistant and quiet
- Plan ways to share leadership and responsibility
- Keep tone positive - “can do” attitudes
- Consider how and when teachers can collaborate
- Encourage the creation of policies and procedures that foster collaboration among teachers
SHARE YOUR PLAN
Thank You!!!!

We touch the future;
We teach.