2019 Georgia Mathematics Summit
Mathematics Update

Lya R. Snell, Ph.D., Mathematics Program Manager
Mike Wiernicki, Elementary Mathematics Program Specialist
Brooke Kline, Secondary Mathematics Program Specialist
Georgia Department of Education
Networking Time!!

❖ You will need:
  ❖ A math networking sheet
  ❖ A pencil/pen
  ❖ A networking spirit
❖ Find a different person to sign each cell of your handout.
❖ Happy Mathing!
Follow Us!
Share the Goodness!!

@GaDOEMath
2 + 1

Truths  Lie
Lunch

YES! FREE LUNCH!

One week of cafeteria leftovers "Parm"
Join one of our Professional Learning Communities!

• [www.edweb.net](http://www.edweb.net)

• (K-5): [https://www.edweb.net/georgiamathematicsk-5](https://www.edweb.net/georgiamathematicsk-5)

• (MS): [https://www.edweb.net/georgiamathematics6-8](https://www.edweb.net/georgiamathematics6-8)

• (HS): [https://www.edweb.net/georgiamathematicsHS](https://www.edweb.net/georgiamathematicsHS)
2019 Mathematics Summer Institute

Dates: June 10 – 12, 2019
Location: Macon Centreplex
Grade Band Sessions: K-2, 3-4, 5-7, and 8-HS
Focus Areas:
- Increasing mathematical literacy among Georgia students
- Improving teacher content knowledge and pedagogy
- Providing evidence-based strategies to meet the needs of all Georgia learners in their quest to master the Georgia Standards of Excellence
Partnership with School and District Effectiveness
NEW

Georgia MathTalks Podcast Series

www.gadoe.org/mathematics
CHARTING A COURSE FOR SUCCESS: AMERICA’S STRATEGY FOR STEM EDUCATION

STEM/STEAM Strategic Goals

White House Strategic Plan for STEM
(December 2018)

IMPORTANT HIGHLIGHTS

Make Mathematics a Magnet
- Mathematics and statistics are foundational to success across all STEM fields of study, providing a universal language to describe and reason about models of real-world phenomena.

Make Computational Thinking an Integral Element of All Education
- Computer science education for all remains a national priority, and this priority is more likely to be achieved through the universal integration of computational thinking across education systems.
Keenville (1<sup>st</sup> & 2<sup>nd</sup> Grade)

- 31 games total at end of Development.
- 15 math games that span all domains and align to specific skills in 1<sup>st</sup> and 2<sup>nd</sup> grade.
- All teachers and administrators have access to Keenville through their SLDS. If the tab doesn’t appear on their platform, they need to contact their local SIS/IT director to gain provisions.
Mathematics Video Series (K-2)

Kindergarten – 10 Videos
K.CC.4, K.CC.5, K.NBT.1, K.G.4, K.G.6, K.OA.2, K.OA.3, K.OA.4, K.OA.5, K.MD.3,

1st Grade – 10 Videos
1.OA.1, 1.OA.3, 1.OA.4, 1.OA.5, 1.OA.6, 1.OA.7, 1.OA.8, 1.NBT.4, 1.NBT.5, 1.NBT.6

2nd Grade – 10 Videos
2.NBT.5, 2.NBT.6, 2.NBT.7, 2.NBT.9, 2.OA.1, 2.OA.2, 2.OA.3, 2.G.3, 2.MD.7, 2.MD.8
Mathematics Video Series (3-5)

3rd Grade – 11 Videos
3.NBT.1, 3.NBT.2, 3.NF.1, 3.NF.2, 3.NF.3
3.OA.5, 3.OA.8, 3.OA.9, 3.MD.1, 3.MD.7 (Parts 1 & 2)

4th Grade – 10 Videos
4.NBT.1, 4.NBT.6, 4.OA.3, 4.NF.1&2, 4.NF.3, 4.NF.4, 4.OA.1&2, 4.MD.1, 4.MD.2 4.MD.8

5th Grade – 10 Videos
5.NBT.1, 5.NBT.6, 5.OA.3, 5.NF.1, 5.NF.2, 5.NF.4, 5.NF.5, 5.NF.6, 5.NF.7, 5.MD.1
Mathematics Video Series (6-8)

6th Grade – 10 Videos
6.RP.3, 6.RP.3a, 6.RP.3c, 6.NS.1, 6.NS.2, 6.EE.9, 6.G.1, 6.G.2, 6.G.4, 6.SP.5

7th Grade – 10 Videos

8th Grade – 10 Videos
8.NS.2, 8.EE.4, 8.EE.8, 8.F.5, 8.G.1, 8.G.2, 8.G.3, 8.G.4, 8.G.5, 8.SP.4
Mathematics Video Series (HS)

High School – 17 Videos

Mathematics Video Project 3.0

- K-2 – 4 new videos (coming July 2019)
- 3-5 – 8 new videos (coming July 2019)
- MS – 4 new videos (coming July 2019)
- HS – 6 new videos (coming July 2019)
Mathematics Professional Learning Modules
(On-Demand PL for Teachers)

- 6 new modules for K-5
- 9 more K-8 modules in development
- 1 Numeracy Project module in development

http://www.galearns.org/
Mathematics Resource Updates – July 2019

• 2019 – 2020 Mathematics Resource Edits Document
  ▪ Will be posted July 2019 on GSO
    ✓ Updated tasks
    ✓ Updated links
    ✓ Updated Hyperlinks
    ✓ Updated Interventions
IDA Course Updates


• 2 updates made to existing courses
  ▪ 27.075200  New Course Number for Differential Equations
  ▪ 27.022900  New Course Number for Grade 7 – Connections Remediation

• 21 GPS Courses Deleted from list of approved, state-funded courses  (beginning 2019-2020)

• 8 new IB Courses Added

• IB Year One Courses Deleted  - June 2019
• IB Year Two Courses Deleted  - June 2020
• IB Theory of Knowledge Mathematics Courses Deleted – June 2020
Ongoing Partnership with USG, TCSG and GICA on High School to Postsecondary Transition
Dual Enrollment Update

- FAQ document updated January 2019


- Approved Dual Enrollment mathematics courses can meet mathematics requirements for graduation once the student has completed Algebra II/Advanced Algebra. Courses that include content beyond Algebra II/Advanced Algebra may be used to meet the fourth core mathematics requirement for graduation.

- Students are prepared for college level mathematics courses only after they have mastered the college readiness standards which culminate in Advanced Algebra or Algebra II. Neither College Algebra nor any other college course has been approved as an equivalent of Algebra II/Advanced Algebra.

- Diploma-level courses can only be awarded mathematics elective credit; however, the TCSG diploma-level courses will not meet high school mathematics graduation requirements for students pursuing a regular high school diploma.
SREB SAT & College Readiness Mathematics Study

• SAT study of students in the College Readiness Mathematics course
• 8 Georgia schools participated - 872 students
• Students in CRM showed gains that were statistically significant.
• 69% showed improvement and the typical gain on the SAT math exam was 47 points
College Readiness Mathematics Professional Learning

- June 18 – 20, 2019
- Dekalb Early College Academy, Stone Mountain, GA
- Open to all high school mathematics teachers

☑️ Evidence-based, effective mathematics instructional strategies to assist in preparing students for post-secondary options.

Partnership with Southern Regional Education Board
Technical College Readiness Mathematics Update

Eligibility Requirements:

The course is designed for students who have experienced difficulty in passing middle school mathematics End of Grade (EOG) assessments, have struggled significantly in the first two high school mathematics courses, and have scored less than 229 on the Next-Generation ACCUPLACER Arithmetic Placement Test*.

*NOTE: Per College Board, the ACCUPLACER Classic Arithmetic Placement Test, which has been used as one of the eligibility requirements for enrollment in TCRM, is no longer available after January 28, 2019. Therefore, districts will now need to use the Next-Generation ACCUPLACER Arithmetic Placement Test to determine eligibility for TCRM. EXCEPTION: If the ACCUPLACER is taken at a TCSG institution, TCSG has received an extension until June 30, 2019.

NEW! FAQs Document – Updated March 2019

2019 Georgia Math Conference

2020 Georgia Math Conference theme will also be on Access & Equity
Please tell us what you’re thinking!

- Use the parking lot in the room to place any questions you have.
- Also, tell us any “+” or “Δ” that you would like to share.
- We LOVE hearing from you!!

<table>
<thead>
<tr>
<th>+</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anything positive you’d like to share</td>
<td>Any changes you would recommend</td>
</tr>
</tbody>
</table>

Any questions you have
Evidence-Based Practices to Support Students with Disabilities in Mathematics

OR

Math Teaching Practices that Work
Evidence Based and High-Leverage Practices for Students with Disabilities

• Evidence Based Practices (EBPs) for special education are instructional strategies backed by research and professional expertise to support the learning and behavior of students with disabilities. (Cook, Tankersley, & Harjusola-Webb – 2008)

• High-Leverage Practices (HLPs) in special education are foundational practices shown to improve outcomes for students with disabilities.


https://iris.peabody.vanderbilt.edu/module/math/cresource/q1/p03/
Evidence Based and High-Leverage Practices for Students with Disabilities

• Mathematics EBPs for Students with Disabilities
  ➢ Visual Representations
  ➢ Metacognitive Strategies

https://iris.peabody.vanderbilt.edu/module/math/cresource/q1/p03/

• Mathematics HLPs for Students with Disabilities
  ➢ Systematically design instruction towards a specific learning goal
  ➢ Adapt curriculum tasks and materials for specific learning goals
  ➢ Provide scaffolded supports
  ➢ Use strategies to promote active student engagement

https://highleveragepractices.org/instruction/
Resources Designed for All Students

- Low barriers to entry
- High scalability
- Multiple pathways to solution
Standards for Mathematical Practice (SMPs) For All!

"Our mindsets need to shift; the SMP's are not only for our talented and gifted students."
~Mike Wiernicki, K-5 Mathematics Specialist, GaDOE

"All students should be provided with opportunities to engage in the Standards for Mathematical Practice; it is a matter of equity."
~Jenise Sexton, Gwinnett County Mathematics Coach
Relish ambiguity.

- Eli Luberoff

https://www.desmos.com/
Visual Patterns

Build the next three stages.

Source: Visual Patterns
http://www.visualpatterns.org/
What comes next?

What *else* might come next?
What comes next?

1  2  3
What comes next?
But we also thought of these
From Graham:

https://gfletchy.com/gadoe19/
Questions??
PL Survey

www.tinyurl.com/mathPLsurvey
Contact Information

Dr. Lya Snell  
Mathematics Program Manager  
lsnell@doe.k12.ga.us  
404-463-7087

Mike Wiernicki  
Elementary Mathematics Program Specialist  
mwiernicki@doe.k12.ga.us  
404-463-1736

Brooke Kline  
Secondary Mathematics Program Specialist  
bkline@doe.k12.ga.us  
404-657-9064

Important Websites to Remember

www.gadoe.org/mathematics Georgia Mathematics Program Updates  
www.edweb.net Professional Learning Communities  
www.georgiastandards.org Curriculum Resources