

## Framingham State University

**Course Number and Title:** PRDV 72828 Math Workshop: Helping All Students Achieve at High Levels

**Credit:** 1

**Format:** Online Using FSU Canvas

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### **Course Description:**

A guide for Elementary Teachers, English Language Teachers, and Special Education Teachers of students in grades K-5 in the implementation and fine tuning of Math Workshop. Math Workshop is a Standards-aligned teaching model that allows teachers to reach all students at their individual level; closing gaps, providing grade level content instruction, and extending thinking. It teaches students to be problem solvers and independent thinkers in mathematics. Participants gain a thorough understanding of what Math Workshop is, what its components are, and how each part is designed to help all students achieve at high levels and reach grade level expectations. Throughout the class, teachers complete readings, watch videos, participate in discussions, and most importantly, try implementing various components of Math Workshop.

### **Learning Outcomes/Course Objectives:**

At the end of this course, successful students will be able to:

1. Explain what Math Workshop is and how it differs from traditional, whole class math instruction.
2. Explain what the different components of Math Workshop are.
3. Explain what Guided Math is and implement this differentiated instruction model with several groups of students.
4. Explain how to differentiate Math Workshop components based on student needs in the areas of Problem Solving, Fluency, and Skill-based Games.
5. Locate differentiated resources for Math Workshop online and in texts.
6. Explain how the Math Workshop teaching model allows teachers to help students close gaps in learning, learn grade level content, and extend their thinking.
7. Explain how Math Workshop develops student skills in the eight Massachusetts/Common Core Math Practice Standards.

### **MA Curriculum Framework Connections:**

- As per the MA Mathematics Framework, this course will help educators develop a teaching model that balances conceptual understanding, procedural fluency, and application.
- Specific math standards will vary based on participant's grade level being taught.

- CCSS and MA Math Framework Mathematical Domains discussed and developed in this course:
  - Number and Operations in Base Ten
  - Number and Operations-Fractions
  - Operations and Algebraic Thinking
  - Measurement and Data
  - Geometry
  - Counting and Cardinality (Kindergarten only)
- Common Core and MA Math Practice Standards developed through this course:
  - CCSS Math Practice MP1: Make sense of problems and persevere in solving them.
  - CCSS Math Practice MP2: Reason abstractly and quantitatively.
  - CCSS Math Practice MP3: Construct viable arguments and critique the reasoning of others.
  - CCSS Math Practice MP4: Model with mathematics.
  - CCSS Math Practice MP5: Use appropriate tools strategically.
  - CCSS Math Practice MP6: Attend to precision.
  - CCSS Math Practice MP7: Look for and make use of structure.
  - CCSS Math Practice MP8: Look for and express regularity in repeated reasoning.

### **Course Expectations:**

- Participation in each weekly module is mandatory.
- Completion of all preparation work, assignments, and discussion board reflections is expected. There will be weekly reading, videos to watch, reflections to complete, and lesson plans to develop and teach. Please post in the discussion area your ideas, successes, and frustrations, as well as your takeaways from the readings and videos.
- Being part of a successful online course requires you to read and respond to your peer's ideas and posts. Each week, it is expected that in addition to your own posts, you respond to at least two posts by your classmates.
- All assignments are expected to be completed on time.

### **Course Texts and Materials:**

#### Required Texts:

*Newton, N. (2017). Math Workshop in Action: Strategies for grades k-5. New York, NY: Routledge. ISBN 978-1-138-78587-8*

*Sammons, L. (2010). Guided math: A framework for mathematics instruction. Huntington Beach, CA: Shell Education. ISBN 1425805345*

Recommended Texts:

*2017 Mathematics Curriculum Framework. (2017). Malden, MA: Massachusetts Department of Elementary and Secondary Education.*

All other required articles, videos, and support materials will be linked to in the weekly modules. The above texts may be available in the FSU Library.

**Instructional Strategies Used:**

Online Discussion and Questioning	Application of concepts in classroom	Independent Learning through print and online texts
Online lecture via presentation	Reflective Response	Viewing/Reading followed by discussion

**Course Content/Outline:**

**Week One:** Introduction to Math Workshop

- What is Math Workshop?
- How does Math Workshop differ from traditional math Instruction?
- What are the basic components of Math Workshop?
- How does Math Workshop help all students learn at the highest levels?

Read: “Math Workshop in Action” Chapters 1, 2, 3

View online presentation (includes linked videos, articles, and websites)

**Assignment**

Respond to two discussion prompts:

1. Introductions/What do you hope to get out of this class
2. Three takeaways from this week’s work

**Week Two:** Guided Math-Small Group Instruction

- What is Guided Math?
- How does Guided Math benefit all students?
- How does a teacher decide who to teach during Guided math groups?
- How does a teacher decide what to teach during Guided Math groups?

Read: "Guided Math" Chapter 5

Read: "Math Workshop in Action" Chapter 6,7

View Online Presentation (includes linked videos, articles, and websites)

### **Assignment**

Plan to deliver 2 guided math group meetings for next week: identify students and content-*you will submit the lesson plan to the instructor next week.*

Respond to two discussion prompts:

1. Describe math instruction in your class now
2. Three takeaways from this week's work

### **Week Three: Fluency and Problem Solving**

- How is fluency developed in Math Workshop?
- What are different activities that can develop numerical fluency in students?
- What does Problem Solving look like in Math Workshop?
- How can a teacher differentiate fluency activities and problem solving in Math Workshop?

Read: "Guided Math": Chapters 7 and 8

View online presentation (includes linked videos, articles, and websites)

### **Assignment**

Write lesson plan for Math Workshop based lesson-submit

Respond to three discussion prompts:

1. Describe your thought process when developing the lesson plans. What parts of the lesson planning process challenged you?
2. Watch several Math Running Records videos on Nikki Newton's site and complete reflection on discussion board
3. Three takeaways from this week

### **Week Four: Math Activators, Games/Activities, and the Debrief**

- What are daily math activators?
- How can activators be used to allow all students to access math content?
- What types of math games/activities should be present in Math Workshop?
- How can math games/activities be differentiated in Math Workshop?
- What is a debrief and why is it important?

Read: "Math Workshop in Action": Chapters 4, 5, 10

View online presentation (includes linked videos, articles, and websites)

### Assignment

Submit portfolio of Math Workshop tools to instructor by end of the week

Respond to the following discussion prompts:

1. Reflection on math workshop lesson delivery
2. Three takeaways from this week/course

### Assessment/Grading:

Recorded Grade	Equivalent Quality Points	Suggested Numerical Value
A	4.0	100-95
A-	3.7	94-90
B+	3.3	89-87
B	3.0	86-83
B-	2.7	82-80
C+	2.3	79-77
C	2.0	76-73
F	0.0	Below 70

Please post responses to discussion board prompts weekly and respond to at least two other postings to develop our learning amongst ourselves. The instructor will also respond to postings, so please keep an eye open for those, as well. In this course, please note that the final project (your online portfolio) is due the last day of the course, so plan accordingly. Contact the instructor via email at any time with any questions or concerns. Two points will be deducted for each assignment that is submitted late. Course grades are based on the following rubric:

Item	% of Final Grade	Exemplary	Proficient	Let's Talk!
<b>Weekly Discussion board posts and comments</b> (9 total)	50	All discussion board posts are complete, detailed, reflective on personal practice, and show a solid	All discussion board posts are complete, detailed, somewhat reflective, and show a good	Late or missing postings.  Lacks good understanding of

personal posts + minimum of 2 responses per week for a total of 17 minimum posts)		understanding of the week's contents. Insightful and helpful responses to other's postings are present.	understanding of the week's contents. Some helpful responses to other's postings are present.	week's content.
<b>Lesson plans and delivery of lessons</b>	25	<p>All lesson plans are completed properly and submitted in a timely manner.</p> <p>Lesson plans include all of the following:</p> <ul style="list-style-type: none"> <li>● Student learning objective</li> <li>● MA standards being taught</li> <li>● Varied student groupings</li> <li>● Assessment (formative or summative)</li> <li>● Procedure (including relevant task (s) that show application of content being learned)</li> </ul>	<p>All lesson plans are completed properly and submitted in a timely manner.</p> <p>Lesson plans include most of the following:</p> <ul style="list-style-type: none"> <li>● Student learning objective</li> <li>● MA standards being taught</li> <li>● Varied student groupings</li> <li>● Assessment (formative or summative)</li> <li>● Procedure (including relevant task (s) that show application of content being learned)</li> </ul>	<p>All lesson plans are not completed properly or submitted.</p> <p>Lesson plans are consistently missing required information.</p>
<b>Final portfolio</b>	25	Portfolio contains items/materials that address all of the components of Math Workshop: activator, mini-lesson, guided math group, problem solving, fluency, games/other	Portfolio contains items/materials that address some of the components of Math Workshop: activator, mini-lesson, guided math group, problem solving,	Portfolio is missing a great deal of information or was not submitted

		activities, and debrief	fluency, games/other activities, and debrief	
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**Copyright**

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**Academic Honesty Policy:**

***Framingham State University Academic Honesty Policy:***

“Integrity is essential to academic life. Consequently, students who enroll at Framingham State College agree to maintain high standards of academic honesty and scholarly practice. They shall be responsible for familiarizing themselves with the published policies and procedures regarding academic honesty. Academic honesty requires but is not limited to the following practices: appropriately citing all published and unpublished sources, whether quoted, paraphrased, or otherwise expressed, in all of the student’s oral and written, technical and artistic work; and observing the policies regarding the use of technical facilities.”

FSU Graduate Catalog, Student Conduct section, page 7

**Accommodations:**

“Framingham State University offers equal opportunities to all qualified students, including those with disabilities and impairments. The University is committed to making reasonable accommodations as are necessary to ensure that its programs and activities do not discriminate, or have the effect of discriminating, on the basis of disability. Academic Support serves students with learning and psychiatric disabilities as well as students with visual, mobility and hearing impairments.”

Please see the Disability/Access Services website for more information or Contact LaDonna Bridges, Associate Dean of Academic Success, lbridges@framingham.edu