

Differentiation through Math Menu: Meeting the Needs of All K6 Students

A CVEDC course with 3 graduate credits from St. Michael's College.

Course Syllabus:

Course Title: Differentiation through Math Menu: Meeting the Needs of all K6 Students

Course Credits: 3 graduate credits from St. Michael's College

Course code #: 527 Diff. Through Math Menu

Time & location:

- *June 24-27, 2019, from 8:00am to 4:00 pm,
plus two follow-up classes on Oct 3, Nov 5 from 3:30-6:30*
- *Course Completion Date: November 30th, 2019*
- *Location: CVEDC iClassroom, 123 Ethan Allen Ave. Dupont Hall, Suite 212, Colchester, VT 05445*

Instructors & contact information:

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Overview :

This 3 credit graduate course explores a menu model for differentiation, reframing Tier I math instruction in order to meet the ongoing range of instructional needs. Learn how to manage a 'centers' approach to your teaching, and restructure your math block to allow for small group and individualized lessons. Embedded in the coursework will be examining lessons through the lens of the Common Core Math Standards of Practice, as well as how to utilize technology as a direct tool for math instruction.

Explorations include:

- How can I keep up with my curriculum map AND make accommodations in time for students struggling with math concepts?
- What do I do with students who consistently finish their math assignments early?
- How do I maintain a pace that matches different students' needs?
- How can I maximize integrating technology with limited resources?
- When do I use a Tier II intervention and when do I support students in the classroom?
- How can I find time to incorporate the great games and resources that I used to use prior to adopting a math program?

Course Objectives:

- **Understand:** Participants will gain deeper understanding in how the menu model provides a structure for differentiation, ongoing formative assessment, and individualized instruction based on student need.
- **Know:** Participants will know and plan for strategies to manage students working independently and/or in small groups during math.
- **Do:** Participants will develop/tweak relevant, engaging, and differentiated (both intervention and enrichment) math activities for students to work on independently during menu time. Collaboratively, they will populate an item bank of tiered activities ready to use with students.

Assigned Readings:

- Jorgensen, J. and M. Murray (2007). *The Differentiated math classroom: a guide for teachers, K-8*. NH: Heinemann.
- Hoffer, Wendy Ward (2012). *Minds on Mathematics: Using Math Workshop to Develop Deep Understanding in Grades 4-8*. NH: Heinemann.

Additional Readings:

- Burns, M. (2004). Writing in Math. *Educational Leadership*, 62(5), 30-33.
- Diller, Debbie (2010). "Getting Started with Math Work Stations." *Math Work Stations*. (pp. 43-51) Stenhouse.
- Tapper, J. (2012). "Chapter 8: a main lesson-menu lesson plan structure to support all students." *Solving for why*. (pp. 146-172). Math Solutions.

Course Requirements:

- Complete assigned readings and other daily assignments
- Complete all additional readings handed out during class
- Complete all assignments as described below
- Participate actively in all sessions
- Attend all sessions

Summer Assignments: Due by July 10 (send via email)

1. Letter:

- a. **Classroom Teacher:** Make a handout for parents and/or students communicating how you are structuring your math block this year and why you have adopted this approach. Be sure to include a configuration of how menu "operates in your room," as well as the benefits/rationale for using menu at your grade level.
- b. **Non-Classroom Teacher:** If you are not a classroom teacher, design a parent/student handout or a handout to your school faculty discussing how you will be utilized to support differentiation in math this year. Be sure to include what your role will be in delivering services to students as well as in what ways you will be utilizing what you learned this summer. *If neither of these assignments fit your job description, please discuss with course instructors for alternate assignment.*

- 2. Management Template:** Make a template that you will use with your students in the fall that displays the organization/management of your menu time. Will students get a paper copy template that they check off? Will your template be posted in the room somewhere that you can change when they switch stations? How will students know which stations they are going to each day?
- 3. Curriculum Map:** Compose a 1-page curriculum map for the first 6-weeks of school that demonstrates how you will introduce/model menu in a guided discovery format. How will you “unroll” menu to your students so that they can gradually gain independence with this new structure? Which stations will you start with?
- 4. Digital Unit Plans/Resources** – Using the Menu Website, digitally add 3 activities to math units. At least one of these MUST be a problem solver and one of these MUST be a technology integration component.

Fall Assignments Email to professor and bring a hard copy with you to the session

Digital Menu Activities - add 3 new activities to the Menu Website

Reflection Options Session I - due by first follow-up session.

Choose one:

1. USING MENU TO WORK WITH A SMALL GROUP/INDIVIDUAL

Write a 2-3 page reflection paper about a time you used menu in order to free you up to meet with a small group or an individual who needed additional differentiated support. What were you able to accomplish with the small group during menu time. *(This could have either been midway through a unit or after a unit had been completed)*

2. MENU TROUBLESHOOTING

Write a 2-3 page reflection paper discussing an issue/challenge you have had in implementing menu. What have you tried to do to solve this issue? What other resources do you need?

Reflection Options Session II - due by second follow-up session.

Choose one:

1. ENRICHMENT OPPORTUNITIES

Write a 2-3 page reflection paper about a time you used menu to provide enrichment activities for (a) student(s) who had exceeded the current standards in math. How did these activities “stretch” the understanding of the mathematician?

2. FORMATIVE ASSESSMENT → GUIDING SMALL GROUP INSTRUCTION

Write a 2-3 page reflection paper discussing a time you used formative or summative assessment in order to identify a small group/individual that you met with during a menu block. How did you plan for this small group? What did you do to provide support? Afterward, how did you determine the growth made?

Field Observation - due by November 17

Connect with a teacher (can be from this course) who currently utilizes menu as a structure to meet their range of learners. Observe a full math block and take notes. Meet with this teacher to discuss the observation (ask questions, share ideas, etc). Write a 1- to 2-page reflection paper highlighting the observation and the main points of the discussion.

Evaluation Criteria

The course grade will be based upon class attendance and participation, and the quality of the work produced to fulfill the course assignments described above.

Weighting System for Assignments:

20% Class participation / Engagement in discussions

10% Written reflections on assigned readings (Summer)

40% Summer menu implementation plan (Assignments #1-4)

20% Field Observation

10% Fall assignments