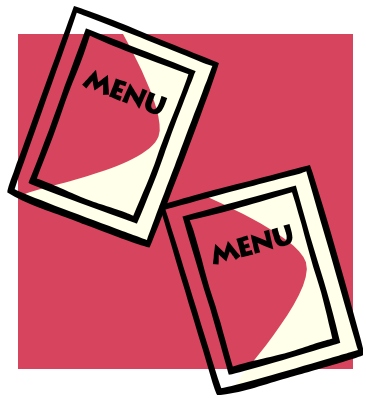




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# Differentiating Instruction Using Math Menus/Centers



# What Does it Really Mean?

[www.glencoe.com/sec/teachingtoday/subject/di\\_meeting.phtml](http://www.glencoe.com/sec/teachingtoday/subject/di_meeting.phtml)

## The DO Component

- Provide various paths to learning the **SAME** objective
- Facilitate “making sense” using multiple strategies
- Provide differing levels of challenge for the **SAME** objective



## The Don't Component

- Develop separate lesson plans for leveled groups
- Teach 100% whole class presenting varying instructional deliveries
- “Water down” curriculum for at-risk learners

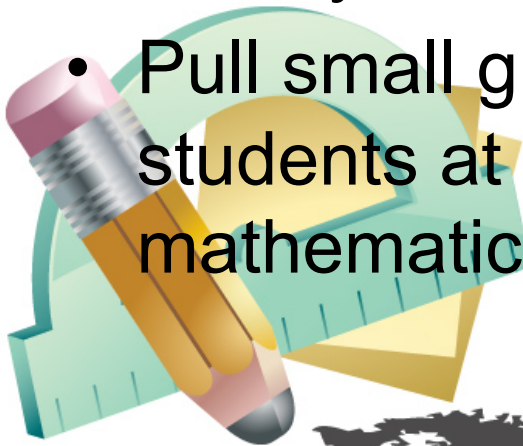
# How Does it Work?

[www.glencoe.com/sec/teachingtoday/subject/di\\_meeting.phtml](http://www.glencoe.com/sec/teachingtoday/subject/di_meeting.phtml)

<b><u>Content Based</u></b>	<b><u>Process Based</u></b>	<b><u>Product Based</u></b>
Pretests	Ongoing Formative Assessment-pre/mid/post	Performance Based/Open-ended Assessments
Various Instructional Delivery Methods for targeted learning styles (Inventory)	Learning stations/Centers	Balance teacher assigned and student selected tasks
Chunk Assignments-part-part=whole presentations to targeted groups	Provide variety of materials to target learning preferences and abilities	Offer students choices from a task menu. Choices represent variety of learning styles and interests.
Post-Tests	Create activities that vary in levels	Ongoing, interactive process of assessing and facilitating learning.

# Math Menus-Product Based

- Whole class teach through a cluster using modeling, collaborative problem-solving, manipulatives, guided practice
- Assess-consider an Exit Ticket with 3 questions whereas students with 3/3 or 2/3 exit to an activity menu and 1/3 or 0/3 exit to a teacher led activity
- Pull small groups of students for 2-3 days while students at mastery choose what looks mathematically appetizing



# Menu Talk Prior to Facilitating

- Restaurant Comparison-
  - Choose one entrée that looks appetizing to you
  - Once your order is placed you are committed to that selection
  - We do not get up and visit other tables
  - We talk quietly with the family/friends at our table (Activities Manager=Peer Support)



# Student-Teacher Conferences Prior to Pulling Small Group

- Have an activity for whole class to work on
- Pull students by activity selections and go over the activity, have an example, answer questions, make supplies accessible
- Then you pull your group and work intensively with them while students work quietly at their seats



# Setting up Math Centers-Process Based

- Set up centers prior to math period. These are not EXTRA math times...these occur as the math period that day. Take activities off the menu for 4-6 stations.
- I have 4 Math Centers in my room at a time
- 3-5 students per center
- Maintain a chart or system for keeping track of which students go where during the 2-3 day stations.
- Strategically group students by abilities, interests, and social responsibilities for time at Math Centers.
- **Recommendation:** one center activity/small group time per math period.



# Center Chart Organization

- I use cards with students' names.
- Cards in the center are my critical small group.
- You can use an NC Wise list to keep track of who has been where or simply move cards clockwise around your chart once differentiated groups are assigned.





# Physical Locations- *limit distractions and “socialization”*



# Teach Math Center Rules/ Expectations

- Define what center behavior “looks like” and “sounds like”
- How will you hold students accountable for their independent work time at centers?
- Establish a mindset that your group time is “sacred.”
- Help students be their own problem solvers by brainstorming and planning for “help options” during center time.



# Center Conferences

- Have a seatwork assignment that is engaging but not too challenging. You want to occupy the larger group so you can meet with small groups individually.
- Meet with each center group. Explain the directions, tasks, field questions, and establish the “go to student” (3-4 minutes max)
- Have a “place” to meet with Critical Small Group. This will likely be 15 minutes after you have conducted center conferences; should leave you about 35-40 min with core group.



# Sense of Place

## Line of Sight



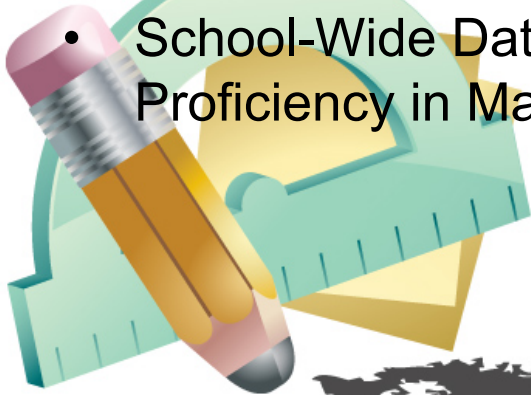
# Is it Just Another Educational Gimmick?

- School Wide Clientele:

- 84% free and reduced lunch.
- 33% ESL/Hispanic in population.
- Co-teaching classrooms with ECE and ESL included.
- 21 subcategories for AYP.
- School-Wide Data-60% Proficiency in Math

- Personal Results:

- 88% proficient in math 2008-2009
- 100% proficient in math 2009-2010
- 92% proficient in math 2010-2011; 13 out of 24 had never passed an EOG as a third grader or fourth grader
- (Proficiency determined by State of NC as those students scoring a Level III or IV)



# Limited Resources?



- Common Core Math Menus-Created by Michelle Baker
- PRISM Award [msscott@bwfund.org](mailto:msscott@bwfund.org)
- Math Wiki from DPI...free download of classroom strategies and blackline masters  
[www.ncdpi.wikispaces.org](http://www.ncdpi.wikispaces.org)
- <http://www.k-5mathteachingresources.com/>
- [www.georgiastandards.org](http://www.georgiastandards.org)




**TIME is your BIGGEST  
hurdle...not money!!**



# Don't be Puzzled...

## Making all the Pieces Fit



Your turn to synthesize this information and share ideas of how we can take this back to our own rooms and make math centers an essential piece!

1) Let's count off by 6's.

2) Get with your numerically assigned groups.

3) Discuss the piece of puzzle you have as a group and record any ideas or suggestions.

4) Return to your "home" table and share your piece of puzzle, then make all the pieces fit not only here but also in your classrooms!



# References/Resources

- <http://www.barebooks.com/> Cool Blank Books, Puzzles, Journals, Bookmarks
- [http://www.glencoe.com/sec/teachingtoday/subject/di\\_meeting.phtml](http://www.glencoe.com/sec/teachingtoday/subject/di_meeting.phtml)  
Differentiating Instruction Article, "Meeting Students Where They Are"
- <http://www.ncpublicschools.org/search/?cx=007953340131544038496%3Ab3cb1hux6m4&cof=FORID%3A11&ie=UTF-8&q=crosswalks&x=0&y=0#1650> Crosswalks
- <http://mathlearnnc.sharpschool.com/cms/One.aspx?portalId=4507283&pageId=5051238> Math Essentials/Classroom Strategies
- <http://www.etacuisenaire.com/centerstage/centerstage.jsp> Center Stage Kits





# Questions? Reflections...

What can I try to answer for you?

I need feedback also...

- Where do you feel “Centered?”
- Where do you feel “Boxed” in?
- What “Changes” would you suggest?

