**Professional Development Agenda**

**Day 1:**

9:00-9:10

-Welcome statement

*As part of the welcome statement, we will tell attendees the format of the three days. They will learn that they will be taking in information and participating in various activities each day from 9:00 until noon. Then they will get an hour long lunch break, after which they will return to the learning and activities until dismissal at 4:00. There will be some reading to be done outside of the PD hours, but it will not be an overwhelming amount.*

-Introduction of presenters

-Introduction of topic (Differentiating Math Instruction) and overall goals for PD program

1. Attendees will be able to define the term “differentiation” and explain how differentiation can be used in the math classroom to benefit students with disabilities as well as gifted students.

2. Attendees will understand the causes of learning and behavioral difficulties in math and be able to explain strategies that can be used to help students with these difficulties.

3. Attendees will be able to discuss usage of Universal Design for Learning in lesson planning, and will differentiate between accommodations and modifications.

4. Attendees will define and describe the models of co-teaching, and construct a co-teaching lesson plan.

5. Attendees will demonstrate understanding of the benefits to using cooperative learning within their classroom to facilitate their students’ learning.

6. Attendees will be able to identify the difference between formative assessment and summative assessment.

7. Attendees will demonstrate technology knowledge by accessing resources with the use of an iPad.

9:10-9:30

-Segment 1: Differentiation/Effective Math Instruction

*Materials: Powerpoint presentation, Smartboard, copies of the 3 articles for activity listed below, Differentiation Strategy Kit for each attendee, Differentiated Math Unit for each attendee, poster board (for whole group brainstorm), markers*

*Videos: Differentiation Is…, Differentiation is NOT…*

-Activating background knowledge

-KWLR charts (see Powerpoint document) will be passed out. Attendees will be asked to fill out what they already know about differentiation in the general education classroom, and what they would like to learn more about.

-Attendees will be asked to go to one of four corners of the room. Each corner will have a label:

1.“I am not yet differentiating in my classroom, I know very little about it, and I am not sure where to start.”

2.“I know a little bit about differentiating, but don’t often differentiate my lessons.”

3.“I occasionally differentiate instruction.”

4.“I differentiate often, but would like to learn even more.”

-Once in their small groups, attendees will share what they have recorded on their KWLR charts with their new group mates.

-Whole group discussion for any volunteers who would like to briefly talk about things that came up in the small group discussion.

-Before being asked to return to their seats, the presenters will explain to the attendees that they will need to seat themselves in groups of like grade levels. All of the 4th grade teachers will sit in one group, 5th grade teachers in another, and 6th grade teachers in another. These will be their primary groups for the 3-day professional development program. Throughout the three days, attendees will be asked to jigsaw and “share-out”, but this will be their “home” team.

9:30-11:00

-Begin Powerpoint presentation (see notes on each slide for specific activities, script, and links to all videos and articles)

-Allow teachers time to locate, open, and explore the PD website. Encourage attendees to keep the website open throughout the three-day training as it contains many helpful resources and will make the presentation more meaningful and interactive.

-Introduce attendees to Twitter activity. We will encourage attendees to use their current twitter accounts, or sign up for a twitter account, in order to hold “conversations” about content from the program outside the hours we are presenting. Throughout the Powerpoint, there will be hashtags in the bottom right corner of some of the slides. These are the hashtags attendees will use when they tweet about a specific topic.

-Differentiation objectives-objectives for this segment will be read to attendees.

-Differentiation defined

* Definition given and discussed
* *Differentiation is NOT* video clip
* *Differentiation is* video clip
* Whole group turn-and-talk to discuss information learned from both video clips

-Differentiation article activity

* Split attendees up into their grade level groups
* Each grade level group will read a different article
  + 4th grade: “Differentiating Instruction: Meeting Students Where They Are”
  + 5th grade: “8 Lessons Learned on Differentiating Instruction”
  + 6th grade: “What Makes Differentiated Instruction Successful?”
* One designated reporter from each group will report information from their article out to the rest of the whole group.

-Differentiated Instruction Strategies Kit

* Pass out one kit to each attendee
* Give time for attendees to leaf through the kit and think about how they could use or adapt the strategies to meet the needs of the students in their current classrooms.

-Relating differentiation specifically to math

* Whole group brainstorm - presenter calls on volunteers for ideas about how to differentiate in the math setting. As volunteers give answers, presenter records on a big poster board so everyone can see.
* Pass out differentiated 4th grade math unit example to each attendee.
* Go through the entire unit, pointing out overview of each lesson, teacher commentary, and the differentiated materials appendix. Encourage questions, comments, and note-taking throughout.
* Post unit brainstorm - volunteers will give example of ideas learned from the unit to add to the brainstorm on the poster board.

-Differentiation conclusion

* Fill out “L” section on KWLR chart.
* Fill out “R” section, reflecting on specific questions given on the Powerpoint presentation.

11:00-12:00

-Segment 2: Math Learning Disabilities (and instructional strategies)

*Materials: Powerpoint presentation, Smartboard, attendees’ curriculum, paper for graphic organizer, pencils, copies of the 3 articles for activity listed below, poster board and art supplies for each of the 3 grade level groups*

*Videos: Making Math Visual, CRA Example*

-Learning disabilities and instructional strategies objectives-read objectives to attendees.

-Dyscalculia discussion-give definition and talk about the possible ways it can affect students.

-Instructional strategies to help students with dyscalculia

* Make math visual - show *Making Math Visual* video clip.
* CRA sequence
  + Explanation of what the CRA strategy entails
  + *CRA Example* video clip
* CRA practice
  + Split attendees up by grade level
  + Attendees asked to find a concept in their textbook that they could apply a CRA sequence to
  + Write down what would need to take place in each step of their CRA
  + Whole group presentations so all attendees can see what each group came up with.
* Fact Memorization - discussion about memory deficits and how that can affect math performance. Talk about ways to help students with memory deficits:
  + Concepts before memorization
  + Small sets and brief sessions
  + Games/timed activities
  + Frequent review
* Article activity - each grade level group will read an article about a different instructional strategy, make a poster displaying the important information from the article, and then present the poster to the whole group.
  + 4th grade: “Self Regulation”
  + 5th grade: “Calculator Use”
  + 6th grade: “Classwide Peer Tutoring”

-Ticket out to lunch - before leaving for lunch, attendees will be asked to write the following on a sheet of paper:

* Definition of dyscalculia
* 3 different effects dyscalculia could have on a student
* 1 instructional strategy you will implement in your classroom to help your students with math disabilities

12:00-1:00

-Lunch Break

1:00-1:45

-Continuation of instructional strategies (Powerpoint presentation)

-Graphic organizers

* Definition
* Presentation of sample state test math problem that could be solved using a graphic organizer
* Graphic organizer activity
  + Hand out blank sheet of paper to each attendee
  + Explain the layout for a “Four corners and diamond” graphic organizer
  + Teach attendees how to fold the paper to make the organizer
  + Ask the attendees to work alone or in pairs (whatever their preference is) to fill out each section of the organizer in order to solve the problem from the previous slide
  + Next slide shows actual student use of the organizer for this problem. Allow attendees to view the student samples, compare it to their own, and discuss how this could be used in their own classrooms and for their own problems.

-Mnemonic Instruction

* Definition
* Overview, definition, and examples of each of the three types
  + Keyword
  + Pegword
  + Letter
* Activity with mnemonic instruction
  + Attendees will be asked to look through their own curriculum and find any areas or concepts they could use one of the three mnemonic strategies for.
  + Encourage volunteers to share what they come up with

-HOMEWORK - Attendees will be asked to do further research on one of four instructional strategies that we did not have time to cover. They are to do the research on their own time and bring their findings back for discussion the next morning. The four strategies are:

* Foldables
* Effective questioning
* Effective problem solving skills
* Coding

1:45-2:45

-Segment 3: Response to Intervention (RTI)

*Materials: Powerpoint presentation, Smartboard, computer lab with Internet access, EasyCBM probe examples, projector in computer lab hooked up to one computer, screen for projector to project on*

-Response to Intervention objectives-read objectives to attendees.

-RTI explanation

* Definition
* Description of tiers with diagram
* Universal screening explanation and process

-EasyCBM

* Move entire group to computer lab
* EasyCBM introduction and brief presentation (presenter will use own login and password to go through the basics of EasyCBM while it is displayed on the screen so everyone can watch and learn)
* EasyCBM exploration activity
  + Each attendee will create own (free) account
  + Attendees will be encouraged to enter fake data to see how the graphs of the results work
  + Attendees will be allowed to start entering actual class rosters to have the program ready when they start screening
  + Provide ample time for exploration and discovery
* Whole group EasyCBM reflection discussion

-Decision making from progress monitoring data

2:45-3:45

-Segment 4: Gifted Learners

*Materials: Powerpoint presentation, Smartboard, Dos and Don’ts of Instruction for Gifted Learners article*

*Video: Gifted Learner Explanation*

-Gifted learner objectives-read objectives to attendees.

-Gifted learner definition/Jacob Javits Gifted and Talented Student Education Act information

-Gifted learner instruction activity

* Pass out “Dos and Don’ts of Instruction for Gifted Learners” article
* Split attendees into two groups (attendees with birthdays between January 1 and July 10 in one group, all others in the other group...just for fun!)
* Explain activity to attendees: Each group will read the article. Once group will be focusing on the dos of gifted learner instruction and the other will focus on the don’ts. As a different means of presentation, each small group will be role playing each do and don’t for the rest of the whole group. Not every member of the small group has to participate in each skit, but we hope that everyone will be involved in at least one.
* Attendees read article and plan role playing skits
* Presentation of skits

-Summary: Play the *Gifted Learner Explanation* video clip

3:45-4:00

-Summary and wrap-up

· Homework reminder: Pick one of four instructional strategies to do extra research on. Bring in all findings for a discussion at the beginning of Day 2.

· Fill out Day 1 Reflection sheet

· Fill out exit survey