

Advice From Colleagues: Differentiation

How might I use centers to support learning for a diverse group of students?

- Activities in Part 3 of the lesson are ideal for setting up centers. They can be combined with exploration activities, games, and even projects to provide regular station activities.
- Have students do the Readiness activities in centers before they get to the lesson that the activity is in. The Readiness activities are designed to prepare students for the content in the lesson.
- After the Progress Check, group students who are having difficulty with certain ideas. Then have a station set-up for those students with related Part 3 activities. Often the Readiness activities are good ones to revisit.
- Have an aide or Special Education teacher in the classroom to run a station or monitor.
- You might use Part 3 activities similarly to Explorations where students rotate through various activities at several different tables with adult supervision at each table, if possible.
- Students can work on a variety of activities...one group will work with the teacher on skills that need extra assistance. Other kids might be doing the Enrichment from lessons from the week, while another group is working on finishing any work they need to finish or doing the Extra Practice from Part 3.
- This is the first year that I've taught EM through campsites or centers. I teach the main lesson. An Ed Tech does lesson related activities. The children work independently with a lesson activity, and the children work independently with the iBooks and online EMgames. (Your school must subscribe to use the online games.) These four campsites occur every day, with every lesson. I am now teaching the main lesson to 4 or 5 students at a time.
- We have ready-made games in baggies for centers. After a while, you easily know how to differentiate the games (for example by using more digits in a game, or more cards). The Differentiation Handbook has suggestions for adjusting the difficulty or focus of some games from each unit.
- Use unit-specific games at some centers and Top-It card games at another, so that some games respond directly to current topics of instruction while other games are reinforcing basic skills.
- Make Math Boxes a "center" for those who can work independently and have yourself teach a small group with Math Boxes as another center. There can still be 2-3 other stations that include EM games and/or partner games.
- Every morning I have math centers set up that practice what we learned last week. I sit and work with the children who need more practice on that specific center and also include some of the enrichment for those who need it.



Advice From Colleagues: Differentiation

How can I provide enrichment within the classroom to students who are ready to think more deeply about content?

- The Assessment Handbook has unit-specific suggestions for modifying the written assessment and for implementing and adjusting the difficulty of the Open Response problems.
- I had an enrichment box that students knew they could access whenever they finished their work in the journals. In this box, there were the enrichments from Part 3, directions to a project from the back of the book that I might not have time to use with everyone, various routines pages like name-collections boxes, and What's My Rule, blank Math Boxes for the students to create one for others in the class to solve, and then copies of those student generated Math Boxes.
- Use copies from the masters section in the back of the Differentiation Handbook to find activities that extend learning.
- Have students record their ideas, strategies, questions, etc., in Math Logs. These could be a spiral notebook that the students keep or a binder. Students could also write their responses to Writing/Reasoning prompts (the writing prompts that go with Math Boxes in about half of the lessons) and Exit Slip-type questions in their logs. (A master for Exit Slips can be found in the masters section at the back of the Assessment Handbook.)
- Differentiation can happen during the main discussion by talking about the concepts at various levels and modeling strategies for kids. Other ideas include: modifying Math Boxes, supplying games that hit more difficult skills, and doing the Enrichment activities for each lesson.
- I've found that students enjoy making a more difficult Math Boxes page for another student at their level from a six box template. They correct each other's papers, too. (Blank masters for Math Boxes can be found in the back section of the Differentiation Handbook.)
- Many Math Boxes can be modified into extended responses. Have students create Math Boxes or extended responses for one another. The Teacher's Lesson Guide has many, ideas.
- Assign Enrichment activities from Part 3 of the lesson to small group of independent workers. During completion of Math Boxes assign better students a writing question to accompany one of the Math Boxes (i.e. explain your thinking). Use Exit Slips to record "what I learned about _____".
- Provide a fact family and a unit, ask students to write a number story using one of the 4 operations. Look for and implement open-ended questions.



Advice From Colleagues: Differentiation

How can I use games to support learning for a diverse group of students?

- After the Progress Check, group students who are having difficulty with certain ideas. Then have a stations set-up for those students with re-enforcement games. Other students can go to stations set up with Enrichment activities or games that are more challenging. (Note that the Differentiation Handbook has unit-specific suggestions for modifying some of the games.)
- The EM games CD is a great. Also games from the games kit can be set out for students to work on.
- There are various versions of the games to help the various skill levels of students.
- I had 5 lists of students up in my room to use. On 2 of the lists, I had students of the same ability partnered so I could differentiate the games for all students. On the 3 other lists, I had students of varying abilities together to give everyone a chance to fully understand the game. Each of my lists was on a different color of paper, so all I had to say was, “We are using the purple partners to play Name that Number.”
- Have daily game play with Top-It and other quick card games. Have a bi-weekly rotating center game time with specific skill focus. Have students seated in cooperative settings so that no one needs to move to play games efficiently.
- Have games set up in tubs first thing in the morning. Assign students to particular tubs. In each tub, adjust the game and/or difficulty of the game for the group of students assigned to the tub. Students can play for 15 minutes when they arrive.
- After initial assessment, teachers can identify groups with common needs and assign/adapt games according to needs.
- I often pair my students by scores on math fact assessments. Some groups play a regular version of a game, while other students play the advanced version. There are suggestions in the Differentiation Handbook for general variations to games (pages 20-25) and for selected games in each unit.

How can I implement Math Boxes with a diverse group of students?

- Have students complete the “easiest” problem first and then work for 10 minutes to do as many problems as they are able. Have students first complete a Math Boxes problem that you want to assess. Then you can circulate and assess as they continue to work.
- Only assign 3 of the 5 or 6 problems, having students complete others if time allows. Remember that students can always go back and complete Math Boxes problems later. This allows them a sense of confidence as they see that they can do work they couldn’t do earlier, and it gives the teacher more flexibility as the students always have problems they can go back and work on.



Advice From Colleagues: Differentiation

- To challenge students, Math Boxes can be made more difficult. Students who are struggling with concepts can work on them in a small group with the teacher.
- Based on my students' needs, I adapt the completion of the Math Boxes. I have some students who are able to complete them on their own and others who need my assistance. If they need my assistance, sometimes I set up a "group" table where everyone who wants to work in a larger group can come together.
- We modify up and down by making questions easier or more difficult. You can easily cross out digits in some cases. This can make a problem more accessible. Make sure that you always have manipulatives ready—every time!
- Start with doing them as a whole class, then partners, then alone. This gets students into the routine. Have individual students demonstrate for class. Jigsaw—have each team do a different box, then put 4 people together who each show the rest of the new team how to do the box they did with their original team. Create a "checker" at each table who has completed the Math Boxes correctly and they circulate and assist other students. Make an overhead of the Math Boxes page and work together as a class.
- The Differentiation Handbook has nice, simple ideas." (See pages 26-29 in the Differentiation Handbook.) There are also various Math Boxes templates included with the masters at the back of the Differentiation Handbook.

What kinds of modifications can I use when teaching Everyday Mathematics in a self-contained Special Education room?

- Take it a little bit more slowly. Also, recognize what it is reasonable to ask them to complete in the time they have for each lesson. Keep them moving through the materials, but allow them time to grapple with and explore the ideas.
- Use manipulatives, grids, etc. Put a schedule on the wall and cross off or pull off completed tasks.
- Our Special Education teachers have copies of the curriculum. They use the parts of the curriculum that they feel their kids need. Readiness activities and explorations are important for Special Education students as these activities tend to have the engaging and hands-on components.
- Set up stations for Part 3 activities, games, and explorations. Make visual instruction cards to support students' independence with engaging in the activities.
- Include many basic skills in a Daily Routine bulletin board, like a calendar board. Play one game daily for a week before adding another game to the repertoire. After learning a new game, have the children describe the instructions for the game in their own words. Record their instructions and post them in the room to provide support for games.





Advice From Colleagues: Differentiation

- Create ONE Math Boxes to use for the week instead of all the individual Math Boxes from each lesson—then have students complete one box per day, you may have to do 2 boxes on Friday, but by the end of the week you have practiced 6 skills from the spiral.
- Again, knowing the learning trajectory is critical. Ideally, teachers should be able to look at a lesson and examine the program for how to scaffold instruction. Be sure to see that necessary skills and concepts are addressed.”
- I teach a “cross-categorical” Special-Education room. I did have an aide, but what worked best for me was to have the students work in “stations.” They did 20 minutes of direct instruction with me, 20 minutes of Math Journals or other seatwork, and 20 minutes of games either with the aide or on the computer. It was really hard for me to schedule lessons and games and math journal pages or worksheets so that I hit everyone’s independent working ability level, but we got into a routine and it seemed to work for us. Sometimes I spread the “Exploration” lessons out over 3 days as the “independent work time” or with the aide, while I went on with the other unit lessons. That helped us keep on pace a little.
- Have your other students doing “non-math” things during the time you are doing direct EM instruction with a small group...whatever those “non-math” things are would depend on what skills your kids are best at doing independently...reading or spelling work or whatever that looks like for you. Then, you could schedule a “Math Journal” time or something like that where everyone is working on their own level, but all at the same time so you could supervise and help as needed. It would spread your math time out, but I know for my Special Education kids, it’s sometimes a challenge to keep them thinking about math things for an hour anyway.

