Class: Special Education Math

## Notes on Teaching Methods:

- Had the students work on their problem solving and reasoning skills.
- Checks various times within the lesson to move the students to other portions of the lesson to keep them engage.
- Students work with a partner and explain how they found their answers.
- Each student wanted to teach the other their strategy to solve the problem.
- Notes on equivalent ratios and how to find other equivalent ratios.
- Students complete the problems in their notes and check their answers with Mrs. Douglass as well as with a partner.
- Small group activities- finding equivalent ratios between people and gum.
- Student grabs a whiteboard to write down other equivalent ratios which Mrs. Douglass writes on the whiteboard.
- Picks volunteers by using Popsicle sticks to have the students share their answer/explanation.


## Examples of Questions Asked:

- What is a ratio?
- What is an equivalent ratio?
- How do you find an equivalent ratio?
- What does an equivalent ratio look like?
- What forms can we write them in as?
- How do you know?
- What support do you have for your explanation?
- Did you use your evidence? Why or why not?
- Why might have the mistake occur?
- Do you have good evidence? Why?
- Do you agree or disagree?
- What strategies did you use?
- How can you read the number as a mathematican?


## Observed Classroom Management:

- Capturing Hearts
- "Quiet down please" 5, 4, 3, 2,
- Hand signals to know if the students understood the concepts and can move on with the lesson.
- Reminds students to have their electronic devices off during class.
- "My turn again."

Class: Special Education Math

## Classroom Structure/Procedures:

- Engagement!
- Learning target's and agenda are on the front white board and back white board.
- Students complete their planners.
- Students work on their bell work/warmup.
- Small group activity- Find equivalent ratios between people and gum.
- Breaking the lesson into smaller chucks between movements of each activity.
- Students negotiate more time to complete the problem.
- White board activity- students writing other equivalent ratios.


## Teacher-Student Relationships/Rapport:

- Monitors the classroom and check the students understanding of finding equivalent ratios.
- Students are eager to participate and sharing their response.
- Reminds students what they should be doing.
- Students go back on task.

Transitions within Lessons:

- Giving the students one direction at a time for them to process to prevent them feeling overwhelmed.
- Checking lessons in smaller pieces to keep their attention.
- Turn in homework assignments at their personalize bin.
- Referencing back to the lessons learning target continuously.
- Students grab their homework- a worksheet on equivalent ratios.


## Further Question(s)?

- What advice do you have for a first year math teacher?
- How do you find all of these activities for your students to learn the mathematical concepts?
- How do you accommodate your students with their IEP's?
- What is the difference with your class and other special education math classes and the lower level general math courses of the junior high curriculum?
- How do you become an effective and highly effective teacher during evaluations?
- What's a good way to accommodate students in your own classroom?


## Notes on Teaching Methods:

- Writes the problems on the whiteboard and projects the homework assignment from the publisher's website.
- Shows examples and solves as a class.
- Mr. Gort asks for volunteers to put their work and final answer on the white board.
- Mr. Gort explains the setup/shows the process to the students.
- Uses a house blueprint to find the actual length of rooms from the house.


## Examples of Questions Asked:

- What did you setup?
- How did you solve it?
- " 9 " what? (units)
- How long is "12 inches" on the map?
- Anyone else agree?
- What about the label?
- What's my first ratio I want to use?
- What do we already know about similar figures?
- Does your answer make sense to you? Why or why not?


## Observed Classroom Management:

- Capturing Hearts
- Monitors the classroom- checks with students understanding while they review.
- Dims the lights for the entire class.
- Laid back teacher.


## Classroom Structure/Procedures:

- Students share good things.
- The learning targets and agenda are on the back white board.
- Homework check- going over Lesson 5.8 Practice B.
- Blueprint activity- students show their work on a black board with a gel pen and show their answer/work to Mr. Gort before they erase their answer.
- Students work on their test review independently or in small groups.


## Teacher-Student Relationships/Rapport:

- Allowing students to move around in the classroom since parts of the class were out for choir.
- Monitors the classroom.
- During work time, Mr. Gort shows the students their current grade if they wanted to see it before they took their test.
- Humor
- Congratulating class on their accomplishment of the Holiday charity -raising money for change to change hearts for the Jenison community.


## Transitions within Lessons:

- Giving clear directions/instructions and going over the daily agenda.
- Passing out the materials for the in-class review by finding dimensions with scales from blueprints.
- Students grabbing a sheet of line paper for their review assignments.
- Reads off the test review problems which the students are responsible for their test review and they write them down on their line paper.


## Further Question(s)?

- What's your role as a department chair?
- Why did you decide to be the department chair?
- What's your advice for a first year math teacher?
- What's your classroom management style?
- How do you quiet down your class?


## Notes on Teaching Methods:

- Lists the daily agenda for the lesson on the front white board.
- Shows and explains to the students on how to setup and solve the proportions for scale model/scale drawings.
- During their notes, the students work on a problem and they go over as a class.
- Mr. Hall and Mrs. Hinkle collaborate with one another and creates a note packet for each unit for their students.
- Places answer key through the document camera for the students to check their answers.


## Examples of Questions Asked:

- How do you know?
- Any questions before we go on?
- Are you sure?
- How can we setup our proportion to find the scale? The missing variable?
- Other questions?
- Which problems do you want to go over?
- Does that make sense?
- Do you have any questions?
- What are examples of use scale and models in the real world?
- Can you think of an example from science class? History?
- What should be on a blueprint and a map?


## Observed Classroom Management:

- Capturing Hearts
- Monitors the classroom and check every students understanding.
- "Quiet down.." 5,4,3,2,1...
- "Shhhh..."
- Mr. Hall walks around the room and check in with every student to see their progress on their homework.


## Classroom Structure/Procedures:

- Share Good things
- As the students are sharing their good things, Mr. Hall is checking every student's homework for completeness before they go over last night's homework.


## Class: Math 7B

- Explains to the students their agenda for the day and references the learning target throughout the lesson.
- The agenda is written on the front board for the students to reference too. Also, the learning target and homework assignment are on the back white-board.
- Homework check
- Places the answer key under the document camera and the students check their answers.
- Lesson
- The students are given notes at the start of the unit and they fill in the vocabulary terms and setup/solve each of the math examples from his google presentation.
- Absent work
- He has a bulletin in the back wall where he places homework assignments for the students to grab/complete once they return.


## Teacher-Student Relationships/Rapport:

- Uses humor
- Allows students to share good things at the start of class.
- Shares math related personal stories.
- "Look at your notes first, then I will be more willing to help you out. Do your part first."


## Transitions within Lessons:

- Gives clear directions and instructions to the students in order for them to know what the expectations are for the lesson.
- The students put away their homework assignment for him to collect later in the week.
- Students get out their notes packet for them to complete their lesson notes and solve the examples for the daily lessons.
- Students work on homework individually.
- They must have their notes packet out and reference it before Mr. Hall is willing to help them.
- He wants them to try it on their own first before he assists them. He wants them to utilize their notes to see how they solve the examples during the lesson.


## Further Question(s)?

- What is your role as a mentor for Mr. Zokoe?
- What the purpose of being a mentor for another teacher?
- What your advice for being a first year teacher?
- Besides the publisher, what other resources do you use for planning your lessons?
- What's your favorite part being a mentor teacher?

Teacher: Mr. Scott Hall
Class: Math 7B

- How do you pre-plan your lessons and organize in your classroom?


## Notes on Teaching Methods:

- Calls on random students to check their understanding.
- Having students to share their thought process
- Shows students with hand signals to indicate whether students solve the problem correctly.
- Asking students for suggestions to problem solve.
- Shows the students different strategies/methods to solve percentages.
- Using proportions to solve percentages.
- $\frac{i s}{o f}=\frac{\text { part }}{\text { whole }}$
- Is/had/has $\rightarrow$ equal (=)
- Of $\rightarrow$ Multiplication (*)


## Examples of Questions Asked:

- How can I convert fractions to percent's?
- Can you do it in a different way (method)?
- How did you get that?
- What do I do for that?
- How do you know that?
- Explain
- Why?
- Questions on that one?


## Observed Classroom Management:

- Capturing Hearts
- "Eyes/Ears- 5, 4, 3,2, 1... (Method to quiet down the class).
- Walks around and monitors the classroom as students work on problems.
- Mrs. Hinkle would check in with every student to check their understanding.
- Students are on task and respond well to Mrs. Hinkle questions.
- Has Learning Targets and assignments written on the back white board.


## Classroom Structure/Procedures:

- Good Things- Ask students about their Thanksgiving Break.
- Warm-up problems on finding decimals from fractions- 3 minutes.
- Each student was given a unit note packet to take notes and complete the example problems during notes.
- Mrs. Hinkle has binders for each of her hours where she organized and files every students assessments for each class hour.
- Mrs. Hinkle has a bulletin board with folders, where students can go to check missing assignments when they are absent.
- Use the publisher's notes for the lessons.
- Has students turn in homework to her when they were absent. Ex. Field Trip
- On the front white board, Mrs. Hinkle has the order of the lesson for her students.
- U-shaped seating chart


## Teacher-Student Relationships/Rapport:

- Asking students to share their thanksgiving break stories.
- Student participation during lessons and discussion.
- Students are willing to ask questions for clarification.


## Transitions within Lessons:

- Introduction to the next lesson.
- Ties the pieces together between different methods for finding percent's.
- Re-reads homework problems to her students before they work on their homework in class.
- The students had 10 minutes in class to work on their homework and ask questions to Mrs. Hinkle.


## Further Question(s)?

- What suggestions do you have for a $1^{\text {st }}$ year teacher?
- What's the difference between accelerated courses compare to general courses?
- Do you teach the same way for your $6^{\text {th }}$ grade accelerated class and your $7^{\text {th }}$ grade Pre-Algebra class?
- On the back white board, are the names of the students representing a reminder for you?


## Notes on Teaching Methods:

- Draws popsicle sticks to call on students.
- Uses desk as a white board to problem solve and determine how to round numbers to the nearest whole number, and tenth.
- Think, pair, and share: talk with your table partner and explain your thinking.
- Teaching students to practice their multiplication skills-test their speed with multiplication of 2's and 3's.
- Stations
- Small group activities.
- How to vary the concepts to fit the individual needs of the students.


## Examples of Questions Asked:

- How can you add 2 to 6 ?
- What comes next?
- What is an even number? An odd number?
- How would you show that?
- How did you know that?
- How did you come up with that?
- Why would you round to 10 ?
- Which one did you do?
- How can we write this as a decimal?
- Take a look, how would you write that?


## Observed Classroom Management:

- Capturing Hearts
- Movement throughout classroom.
- Smaller groups
- "Turn back around for me. Face your partner."
- "Be respectful. Be on Time. Be Prepared."


## Classroom Structure/Procedures:

- Get planner out and the students fill in their learning target and homework.
- Multiplication facts practice- working with individual students with multiplications of 2's and 3 's.
- Mad minutes
- Money and Decimal/place value activity
- Number line activity- students were given a number on a card and had to plot themselves on the number line between two whole numbers.
- Reviewing how to round numbers.


## Teacher-Student Relationships/Rapport:

- Working with every individual student.
- High fives/praised the students for positive reinforcement.
- Walks around and checks every students understanding.


## Transitions within Lessons:

- Re-explaining the classroom expectations to the students when they work with partners.
- Movement/engagement
- Chunking into smaller times for the students to focus on the content.
- Turn in homework to the second hour bin.


## Further Question(s)?

- How can I accommodate my students in the classroom?
- What have you learned so far about yourself as a first year teacher?
- What advice do you have for a first year teacher?
- What's the pros/cons of co-teaching a class?
- How has the mentorship program help you out?

Class: Math $8 \mathrm{C}-5^{\text {th }}$ Hour and Math $8 \mathrm{~A}-6^{\text {th }}$ Hour

## Notes on Teaching Methods:

- Takes attendance with students responding to warm-up problem and/or showing their completeness of book problems/worksheet.
- Students already had a warm-up sheet to complete their weekly warm-ups.
- Students working in small groups and/or individually during homework time.
- Students show Mr. Ohman their worksheet for completeness as he takes attendance.
- Assigning students problems to put their work on the white board.
- Hand/arm motions from students to show the slope of the line (Positive, negative, zero and undefined).
- Card Game: Assessing students on order of operations.
- Video (Publisher-myhrw.com- online video with Mr. Burger): Students watching a math tutorial on how to find slope and stopping the video to ask students questions about what they are observing.


## Examples of Questions Asked:

- How did you find slope?
- If you are given two points, how can you find the slope?
- If you are given a graph, how can you find the slope?
- What does it mean when you have a negative slope? Positive slope? Zero slope? Undefined slope?
- In your graph, what does a negative slope look like? Positive slope? Zero slope? Undefined slope?
- What's the common mistake?
- Does it matter how we label our order pairs while solving for slope? Will we find our answers for slope to be the same?
- Why do we use the letter $m$ for slope?
- What if I pinched another point, how could I find slope?
- From a line, how can you find slope?


## Observed Classroom Management:

- Capturing Hearts
- Desks were in rows that faced the front whiteboard and his podium.
- Each row shares a good thing depending on the weekday.
- In his 8C math course, he is more unstructured and uses his personal relationships to manage his classroom to make them feel involved with the learning environment.
- He has to make sure a few students do not have outburst and/or disrespect him by being consistent with his discipline to keep class in order.

Class: Math 8C $-5^{\text {th }}$ Hour and Math 8A- $6^{\text {th }}$ Hour

- In his 8A course, he is more structured and keeps the students engage by having them work in smaller groups for homework.
- He monitors the room and check with every student while they are working on their assignment to check their understanding.
- "The power to win must come from within."


## Classroom Structure/Procedures:

- Homework check-do it together as a class to check answers.
- Students asked which problems they wanted to go over before they did their homework check.
- The teacher would call on students to share their response.
- Use his whiteboard to go over problems students struggled with.
- Problem of the day-For 8A students only- the students work on this problem and they go over the following lesson.
- Lesson- Teaching student's different strategies to solve the math problem for finding slope.
- Homework time- Students completed their quiz review individual or in small groups (2-3 students)
- Teacher checked in with each group and asked formative questions to check their understanding.
- At the end of class, they went over the review worksheet.


## Teacher-Student Relationships/Rapport:

- Students respected the teacher and loved when he shows them other tricks/strategies to solve their math problems.
- Students enjoyed his stories that tied into mathematics.
- Students loved how personal he is with each student. He focus on building individual relationships with every student to eliminate problems with classroom management.
- Mr. Ohman check every assignment and check their understanding.


## Transitions within Lessons:

- Students follow along with the warm-up, homework check and class time structure.
- Some students were off task, but the teacher got them back on track to review their concepts in their review worksheet.
- Handout class materials to student's.


## Further Question(s)?

- What advice would you give to a new teacher?
- Besides using your publisher, how did you find your resources to teach mathematics?
- What inspired you to teach mathematics?

Class: Math 8C $-5^{\text {th }}$ Hour and Math $8 \mathrm{~A}-6^{\text {th }}$ Hour

- How do you real with classroom discipline?
- Do you feel showing the students the tutorial online videos from their online textbook helps them reinforces the concepts learned in the lesson? Why or why not?
- How do you accommodate your students?
- What's your biggest challenge teaching the students in Math 8C?
- How often do you play your math card game with your Math 8C students? What's the purpose of this activity?


## Note to self:

- It's more important to build strong teacher-student relationships in order to get students want to learn mathematics. The students and their eager to learn is the most important aspect in the learning environment, then it's the curriculum.

Class: Math 8A

## Notes on Teaching Methods:

- Calling on volunteers to put graphs and answers from a worksheet/in-class activity on the whiteboard.
- Uses his i-pad and connects it with AppleTV to project/control his lessons slides.
- Mr. Zokoe also had his answer key on his digital copy of his homework.
- Gives his students printed notes for his students to follow.


## Examples of Questions Asked:

- What did you notice?
- What does it look like on your graph?
- What was the equation?
- What would the $x$-intercept be?
- What would the $y$-intercept be?
- Why would you my graph look differently?
- Who can read this for me?


## Observed Classroom Management:

- Raising voice
- Monitors the classroom.
- Social Contract- Students creating the classroom expectations.
- "You're responsible for your own actions!"
- 4 questions- Capturing Hearts
- What are you doing?
- What are you supposed to be doing?
- Are you doing it?
- What are you going to do about it?


## Classroom Structure/Procedures:

- Learning targets and homework are listed on the front white board.
- Homework check
- Has student's volunteers and put their assigned problem on the whiteboard for the class to check over.
- The class has a discussion on any problems they want to go over.
- Lesson
- Mr. Zokoe passes the students lessons notes.
- He uses the publisher's notes to go over the content of the lesson.
- Mr. Zokoe shows the steps of how to find $x$ intercepts and $y$-intercepts.
- He also gives the student an opportunity to solve one on their own.
- Homework time
- The students are given a worksheet on find x and y intercepts.
- The students can work on individually or in small groups.


## Teacher-Student Relationships/Rapport:

- Makes small talk with students as they work on their homework.
- Uses humor.
- "Getting back in the math mode."
- Student are eager to participate.
- Checking in with students who have missing assignments.


## Transitions within Lessons:

- Gives clear instructions/directions about how to find $x$ and $y$ intercepts as well as on the classes homework assignment.
- Making connections with parts of slope, $x$-intercepts and $y$-intercepts.


## Further Question(s)?

- What's your purpose of your social contract?
- What have you learned so far from your first year of teaching?
- How has the mentorship program benefited you?
- What experiences from your long term substitute has helped you during your first year of teaching?
- How do you plan your lessons in advance?
- How do you get your materials organized for the week?
- What do you recommend to do to land a teaching position in a district/community you want to teach in?


## Note to Self:

- Look more into Khan Academy and mathworksheets.com for more math resources.

