| Grade: 3rd |  | Subject: Math |  |
| :---: | :---: | :---: | :---: |
| Materials: cubes if needed |  | Technology Needed: smart board or projector possibly |  |
| Instructional Strategies: |  | Guided Practices and Concr | ion: |
| Direct instruction | Peer teaching/collaboration/ | Large group activity | Hands-on |
| Guided practice | cooperative learning | Independent activity | Technology integration |
| Socratic Seminar | Visuals/Graphic organizers | Pairing/collaboration | Imitation/Repeat/Mimic |
| Learning Centers | PBL | Simulations/Scenarios |  |
| Lecture | Discussion/Debate | Other (list) |  |
| Technology integration Other (list) | Modeling | Explain: |  |

## Standard(s)

MAT-03.OA. 03 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

## Objective(s)

By the end of the lesson, students will use division within 100 to solve a word problem in situations involving equal groups by using drawings and equations with a symbol for the unknown number to represent the problem.

## Bloom's Taxonomy Cognitive Level: Remembering and Understanding

Classroom Management- (grouping(s), movement/transitions, etc.)

- When transitioning from the front of the room to the desks and vice versa, call out student's numbers a few at a time or by other features they might have.
- Students will work with partners based on where they are sitting.


## Differentiation

Below Proficiency: Students will use cubes or other math materials to break down the equations into equal groups. Work with a higher proficient student when doing the partner worksheet.

Above Proficiency: Student will work with below proficient student when doing the partner worksheet. Allow the students to give you another example of how they could solve division problems.

## Approaching/Emerging Proficiency: Student will complete lesson

 as is.
## Modalities/Learning Preferences:

Visual: writing out the problems on the board or using the cubes Auditory: discussion of how to solve division problems and working with partners on the worksheet
Kinesthetic/tactile: using the cubes or their fingers to group and divide

Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.)

- Students will be respectful when the teacher or other students are talking by listening.
- When working with partners, students will be on task.
- Student will participate in the whole group lesson and with partners.

| Minutes | Procedures |
| :---: | :---: |
|  | Set-up/Prep: <br> - Have worksheets ready. <br> - Have chart made for examples. |
|  | Engage: (opening activity/ anticipatory Set - access prior learning / stimulate interest /generate questions, etc.) <br> - With the students sitting at the front of the classroom, ask them "Who can tell me what multiplication is?" <br> - Allow a student to answer and discuss what it really means. <br> - Help students to get to an understanding of what multiplication is. <br> - "Now can someone give me an example of a word problem using multiplication." <br> - Allow students to give examples and give feedback on ones that are good. |

Explain: (concepts, procedures, vocabulary, etc.)

- On the smart board (or white board or projector depending on what is available or easiest to use) have a chart with the headings of 3 columns being "number of groups, number in each group, and number in all the groups." Then have 3 rows underneath that.
- "I am going to come up with a problem for us to solve. Frogs usually have 4 legs. In a pond, there are 8 frogs. How many frog legs are there?"
- "Based on this chart, what information do we have to solve this problem and what do we need to find out?"
- Allow the students to help fill in the chart with the information they come up with.
- "Now turn and talk to your partner about how to solve this problem and then raise your hand when you have the answer."
- Once the students have gotten then answer of 32 legs, add it to the chart.
- "Now this next problem is going to be different from the one we just solved."


## Lesson Plan Template

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- "Frogs usually have 4 legs. In a pond, there are 16 frog legs altogether. How many frogs are in the pond?"
- Pause and allow students to think quietly.
- "For this problem, what information do we have and what do we need to find out?" Point to the chart as you ask this question.
- The students should answer 4 is the number in each group and 16 legs is the number in all the groups.
- "Now I want you to take a second and think about how we can solve this problem."
- Pause for students to think.
- "Now turn and talk to your partner and come up with the answer and a solution to solving this problem."
- Bring the group back together and see what strategies the students used to solve the problem and then discuss it. Did they use cubes, draw a picture, skip counting up to 16 by 4 s, or just use reasoning by mathematical knowledge they already have, etc.
- "What is the same is the same or different about this problem as compared to the first one we did?"
- Pause and allow students to give answers. Base discussion on those answers. Help students make connections on how they are similar but also opposites.
- Help student make the connection between multiplication and division. (dividing into equal groups)

Explore: (independent, concreate practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)

- Have students return back to their seats and pass out the worksheet 51/52.
- "Now as a whole class we are going to work through number 1 together."
- "There are 28 desks in the classroom. The teacher puts them in groups of 4. How many groups of desks are in the classroom?"
- "Now thinking about are chart, what information do we have and what do we need to find out?"
- Fill in the students answers on the chart.
- "What kind of strategy can we use to find the answer for this division problem?"
- Based on the student's responses demo how to get the answer. Then have the students follow along and put their work onto the worksheet for number 1.
- "Now you are going to work in partners with those at your table or that you are sitting next to and finish 2, 3, and 4 together."
- "Work together slowly and think about the different ways you can solve these division problems."
- Walk around and see what kind of approaches the students are using to solve the problems.
- Clarify any problems that students might be having difficulty solving.


## Review (wrap up and transition to next activity):

- After it seems like the majority of the students are done solving the problems or it is time to wrap up the lesson, bring them back together.
- "Can someone tell me how they were able to solve question number for with their partner?"
- After getting the answer from a student, quickly summarized how what they did and make it a point to show that division is when you are given a total number that is divided into equal groups.
- Then and out the assignment page 53 and give it as homework.


## Formative Assessment: (linked to objectives, during learning)

- Progress monitoring throughout lesson (how can you document your student's learning?)
- Ask questions throughout the lesson about what strategies or approaches they are using to solve their division problems.
- Collect the $51 / 52$ worksheet to see how students are doing when working with a partner on division.


## Summative Assessment (linked back to objectives, END of learning)

- Collect homework assignment page 53 that the students do on their own.


## Reflection (What went well? What did the students learn? How do you know? What changes would you make?):

I felt that for this lesson I had good transitions and time management, which were two things I struggled with or could have improved on from my lesson that Mrs. Hager observed. The students were working on their calendar math before I started my lesson and I could tell they were starting to get tired and talkative. So, even before my lesson began I had them do Simon Says with me in order to get some energy out and be able to refocus. I thought this helps right way. I was surprised to see that some students were apply to figure out how division works before I gave them any information. This was only a few students, but I was impressed. After reflecting, I feel like I could have gone through the explain section of the lesson better and been more prepared for how I was actually going to teacher the division part. I could tell that when I walked around to help students when they were working with partners that many of them were still confused on division. Maybe instead I could have brought the whole class back together and went through it again slower with them. I'm not sure if that would have worked or not, but I would definitely need to work on teaching division differently or better for the next time. For example, I should have gone through how to write out a division problem based on a word problem like $16 \div 4=$ $\qquad$ . As I walked around, this seemed to be confusing for students because they were stuck on how a multiplication nrohlem was written I did write a division nrohlem on the hnard like this hut onlv nnce and I didn't exnlain or on through it enoush I wnuld sav

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that students did use the strategies that we went through correctly when we did them together or they worked with a partner. For example, we counted by 4 s to 16 and they followed along perfectly. In groups, some students continued to use this strategy and some would draw it out or work backwards from a multiplication problem. Each of these approaches worked and the students were able to differentiate the lesson to them in those ways. I would say that overall, my area that I could improve in for this lesson would have been being more prepared to teacher the whole group lesson part. It is interesting because that was the area I did well on during my social studies lesson. It seems like I focused more on the areas I could improve on (time management, transitions, behavior management) that I ended up not doing my best in the area I was better with in the last lesson I taught. This was a hard lesson to teach because it was new information that the class hadn't done or known before. It was also hard because it was $3^{\text {rd }}$ grade math and I haven't taught many math lesson yet. Although, I am not totally disappointed with how the lesson went because I know the students are just starting on division so I didn't expect them to get it all right away.



