

Learning Division

Grade: Grade 3		Subject: Math	
Materials: 18 white boards, 18 markers, 18 erasers, paper, pencil, something to color with		Technology Needed: N/A	
Instructional Strategies: <input checked="" type="checkbox"/> Direct instruction <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input checked="" type="checkbox"/> Guided practice <input type="checkbox"/> Visuals/Graphic organizers <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> PBL <input type="checkbox"/> Learning Centers <input checked="" type="checkbox"/> Discussion/Debate <input type="checkbox"/> Lecture <input type="checkbox"/> Modeling <input type="checkbox"/> Technology integration <input type="checkbox"/> Other (list) <input type="checkbox"/> Other (list)		Guided Practices and Concrete Application: <input checked="" type="checkbox"/> Large group activity <input type="checkbox"/> Hands-on <input checked="" type="checkbox"/> Independent activity <input type="checkbox"/> Technology integration <input checked="" type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Imitation/Repeat/Mimic <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain:	
Standard(s) 3.OA.3 Using drawings and equations with a symbol for an unknown number, solve multiplication and division word problems within 100 in situations involving equal groups, arrays, and measurement quantities.		Differentiation <p>Below Proficiency: The students that are below proficiency will be given additional instruction as well as be paired with a classmate of higher proficiency. This way the student can learn from their peer and through classroom instruction.</p> <p>Above Proficiency: The students that are above proficiency will be allowed to do more challenging division problems. They will also be able to do 2 word problem creations at the end of class. If they finish early, they can help their classmates if they have questions. This will help the student demonstrate their understanding of division.</p> <p>Approaching/Emerging Proficiency: The students that are approaching proficiency will be asked to follow along in class and collaborate/discuss with their peers about what they are learning. They will receive direct instruction, guided instruction, and then be asked to independently illustrate a division word problem of their own creation.</p> <p>Modalities/Learning Preferences: This lesson is for visual, tactile, and auditory learners. It is planned with accommodations for learners who are above, below, and at proficiency. It is also planned with the idea in mind of students who are nonverbal and have an aid. This student will be given reasonable accommodations in that the aid will help him in his understanding and writing of division problems and pictures.</p>	
Objective(s) The student will illustrate division word problems within 100 by creating their own word problems and drawings for equations with an unknown number. Bloom's Taxonomy Cognitive Level: Application			
Classroom Management- (grouping(s), movement/transitions, etc.) The students will be engaged through active class discussions and collaboration. They will also be engaged through creating and practicing their division problems on the white boards. The students will be grouped by being asked to partner up with the person sitting beside them. For transitions the students will be sitting on the floor a majority of the time unless they need accommodations in which they will be in a chair or some other form of seating at this time. When transitioning to their desks, the students will be allowed to go one at a time after their math fact is told to the teacher.		Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules and expectations, etc.) The students are expected to behave respectfully towards their peers and the equipment given to them. They are also expected to answer and ask questions when prompted or confused. When the students are given learning equipment they are expected to use it as directed. When working with each other the students are expected to keep on task and learn from each other. Lastly, students are to be open to trying to learn the concept. If in the case of angry behaviors, the teacher will take extra time with the student to help them or allow them to leave the group to calm down and return when ready. In the case of sad or negative behaviors the teacher will reassure the student and help them understand the concepts through more instruction.	
Minutes	Procedures		
5-7	Set-up/Prep: Before the lesson begins, the teacher should ensure all of the materials are collected and ready to go. The teacher should collect 18 white boards, markers, and erasers as well as enough paper for each student and extras for mistakes. Each student should have pencils or something to color with but have a few extra ready just in case.		
5-10	Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.) To begin the lesson, the teacher will have all of the students come sit on the carpet in front of the smart board. The teacher will then ask the students what they know about multiplication (how it is done, why we do it, how does it help us, etc.). Then ask for		

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	<p>some examples of multiplication problems the students may know. The students must raise their hand to say their fact (ex. $2 \times 5 = 10$, $3 \times 4 = 12$).</p>
<p style="text-align: center;">20-30</p>	<p>Explain: (concepts, procedures, vocabulary, etc.) Once the students have given a few multiplication facts tell them that they will now be learning the reverse of multiplication; division. Explain that division is simply reversing multiplication problems so just how $5 \times 4 = 20$ we can reverse it and take the answer 20 and divide it by one of the numbers to get the other number. Give some examples of how this works with other problems as well. Next, have the students practice a few division problems by giving them a white board, marker, and eraser. Write a division problem on the board such as $6/3 =$ and see if the students can solve it on their white board. Encourage them to think about multiplication and 3 times what gives them six. Also encourage them to talk to their peers about their answers as well. Practice a few division problems and discuss them, and then try a word problem such as Bob has ten apples, puts his apples in rows of two, how many apples are in each row. Have the students see if they can figure out this word problem. A few more can be tried to make sure the students understand. Each word problem should be discussed and pictures can be drawn for understanding.</p>
<p style="text-align: center;">20</p>	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions) Explain to the students that they will now be creating their own division word problems. Have them think about the math fact they want to use and when they are ready they can come up and tell you their math fact. If it is correct hand them a piece of paper and tell them to return to their desk and write a word problem for their fact. During this time, the teacher will walk around the room answering questions and helping students as they write their word problems. As the students finish writing their word problems have them draw a picture for it and color it in.</p>
<p style="text-align: center;">5</p>	<p>Review (wrap up and transition to next activity): To wrap up the lesson, walk around the room and ask each student individually to explain their word problem and thinking to you. Next, stand at the front of the classroom and get their attention. Ask the students what division is, how we divide, and if they have any questions. If not, tell the students that the next lesson will begin in 3 minutes. Have the students either hand in their assignment if they are done, or save it for later. Transition to the next lesson by having the students seated in their desks waiting for the teacher to begin.</p>
<p>Formative Assessment: (linked to objectives) Progress monitoring throughout lesson- clarifying questions, check-in strategies, etc. The students will be assessed on their answers to questions asked during class, the answers they write on their white boards, and their overall understanding of division by creating their own division fact pictures.</p> <p>Consideration for Back-up Plan: If there is good discussion during the guided practice and the lesson goes too long, the last part of creating their own word problem will be dropped. This part will then be done the next day. The goal of the lesson is to get the students to understand division.</p>	<p>Summative Assessment (linked back to objectives) End of lesson: The students will be assessed on their illustration of division word problems within 100 by creating their own word problems and drawings for equations with an unknown number.</p> <p>If applicable- overall unit, chapter, concept, etc.: N/A this lesson is simply a starter lesson to the concept of division.</p>
<p>Reflection (What went well? What did the students learn? How do you know? What changes would you make?): I think this lesson plan went as good as to be expected. I say this because many of the students in the class are at beginning stages when it comes to learning the concept of division. They understand that multiplication is the reverse of division and that it can be used to help solve division problems, but they aren't quite sure how it works yet. With this in mind I tried my best to make this a practicing division lesson so the students could work on their division skills as well as be introduced to word problems containing division. With this in mind there were many things that went well during the lesson. The students enjoyed working with the white boards because they had the opportunity to write down the problem and try it for themselves instead of simply listening to me teach it. The white boards were also a great tool for the students to use to draw a picture of their thinking to figure out the problem. I even enjoyed using the white boards because I could assess the students work and thinking as I walked around the room. Another pro of the lesson was having me up at the front of the room helping the students go through the correct answers by providing a variety of ways to figure out the problems. The students also helped with this piece because they could tell me the different methods each of them used to figure out the problem. The con of the lesson was the part where the students made their own division problems. Initially I told the students what to do, gave them a piece of paper, and let them begin, but this didn't work too well. I could see many of them were struggling, so I gained their attention and wrote steps on the board in the form of an example. It went like this: 1. Write a multiplication equation. 2. Flip your multiplication equation into division. 3. Draw a picture of your equation. 4. Write a story to go with your equation. After I wrote this on the board, many of the students knew what to do and they had the visual of the steps in case they forgot.</p>	

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Although I am glad I made this change, I think some of the students were not yet ready for this step and they need more instruction on division. I do, though think that this lesson was great exposure for the students to get ready to solve division word problems. In the future, I will be sure to put clearer instructions up on the board right away and to do this lesson in small groups! Small groups would be very beneficial to this lesson because it would allow the students who need a bit of extra help with division to get what they need. Small groups would also allow for greater discussion and understanding among the students. Doing this as a whole group lesson was a bit chaotic because of all of the needs of the students, so small groups would help this problem out immensely. Overall, I think this lesson served its purpose of helping the students learn and practice their division because I was able to see their understanding in the work they handed in. In each students work I could see their thought process, their equation, their pictures, and their word problem, and for the most part, all of them did pretty well.