

# Lesson Plan Template

Date: 2/4/19

<b>Grade: 2</b>	<b>Subject: Math: 2-Digit Subtraction Practice</b>
<b>Materials: 4 Mini Whiteboards, Fraction Anchor chart, Base-10 Manipulatives (Blocks)</b>	<b>Technology Needed: Smartboard Interactive Worksheet</b>
<b>Instructional Strategies:</b> <input type="checkbox"/> Direct instruction <input checked="" type="checkbox"/> <b>Guided practice</b> <input type="checkbox"/> Socratic Seminar <input type="checkbox"/> Learning Centers <input type="checkbox"/> Lecture <input type="checkbox"/> Technology integration <input type="checkbox"/> Other (list) <input type="checkbox"/> Peer teaching/collaboration/cooperative learning <input checked="" type="checkbox"/> <b>Visuals/Graphic organizers</b> <input type="checkbox"/> PBL <input type="checkbox"/> Discussion/Debate <input checked="" type="checkbox"/> <b>Modeling</b>	<b>Guided Practices and Concrete Application:</b> <input checked="" type="checkbox"/> <b>Large group activity</b> <input checked="" type="checkbox"/> <b>Independent activity</b> <input type="checkbox"/> Pairing/collaboration <input type="checkbox"/> Simulations/Scenarios <input type="checkbox"/> Other (list) Explain: <input type="checkbox"/> <b>Hands-on</b> <input type="checkbox"/> Technology integration <input checked="" type="checkbox"/> <b>Imitation/Repeat/Mimic</b>
<b>Standard(s)</b> <b>2.NBT.5- Use strategies based on place value, properties of operations, and/or the relationship between addition and subtraction to fluently add and subtract within 100.</b> <b>2.OA.2- Use mental strategies to fluently add and subtract within 20.</b>	<b>Differentiation</b> <b>Below Proficiency: Given the option to use the base-10 manipulatives for all of the problems they do on their own. Use in the skit.</b>  <b>Above Proficiency: Only do a few problems with base-10 manipulatives.</b>  <b>Approaching/Emerging Proficiency: Use manipulatives for the first half and try to do the second half without.</b>  <b>Modalities/Learning Preferences: Visual-Spatial, Verbal-Linguistic, Logical-Mathematical, Bodily-kinesthetic, Interpersonal, Intrapersonal.</b>
<b>Objective(s)</b> <b>Students will be able to determine which strategy to use by using actions and sayings for the rules and performing a skit by the end of the lesson.</b> <b>By the end of the lesson, students will be able to explain how they got their answer to the addition and subtraction problems by using base-10 manipulatives.</b> <b>By the end of the lesson, students will be able to solve a combination of addition and subtraction problems using mental strategies by applying the information from the skit, base-10 manipulatives, and rules.</b> <b>Bloom's Taxonomy Cognitive Level: Evaluating, Applying</b>	<b>Behavior Expectations- (systems, strategies, procedures specific to the lesson, rules, and expectations, etc.)</b> <b>Students should raise their hand if they have a question. Students that are asked to participate in the skit will be expected to take it seriously so the others can learn from it without being distracted. The students that are not doing the skit should give the other students their full attention and encourage them. All students are expected to participate and follow along. When we are going through the rules together, the students will use a level 2 voice. Students should not be visiting or messing around with their neighbors during the lesson. The love and logic approach is used when behavior issues occur. Students should use the base-10 manipulatives appropriately and share with the other students at their table if necessary. Students should do their own work when given the practice problems, so I am able to see their progress.</b>
<b>Classroom Management- (grouping(s), movement/transitions, etc.)</b> If students need to come to the front of the room to see, they will quietly grab the lap desks and find a spot where they can see. These students should be spread out, so they are not tempted to mess around with others. Students will do the actions together with me when we are going over the rules. These actions should be done the right way with no messing around, so it is a learning tool for the students to remember their rules. When students are coming to the front for the skit, the peers on the floor will be asked to move back so they can see and the others are not having to walk over them. If a student is struggling throughout the lesson, I will use the love and logic approach to give them choices to improve. When I need the student's attention or am waiting for them to all be ready, I will ask them to give their signals such as a hand on their head, nose, or shoulders.	
<b>Minutes</b>	<b>Procedures</b>
<b>1</b>	<b>Set-up/Prep:</b> <b>Get our 4 mini whiteboards, EXPO marker, and Fraction Anchor Chart. Get out the base-10 blocks/manipulatives</b>
<b>3-5</b>	<b>Engage: (opening activity/ anticipatory Set – access prior learning/stimulate interest /generate questions, etc.)</b> <ol style="list-style-type: none"> <li><b>1. Say the 3 rules together.</b> <ul style="list-style-type: none"> <li>• <b>More on the top? No need to STOP! (Show students actions, touch the top of your head with stop signal and then show the signal to the crowd.</b></li> <li>• <b>More on the floor? Go next door... and get 10 more! (Touch the floor, knock on the door, grab the 10 more)</b></li> <li>• <b>Numbers the same? Zero's the game! (Start with the same number on each hand, collide your hands together taking those numbers away and creating a zero with your hands.)</b></li> </ul> </li> <li><b>2. Go over the Listen and Draw section with an interactive skit.</b></li> <li><b>3. Using mini whiteboards, one student will be holding the number seven and another the number four to create the number 74. The person that is holding the number seven will also be holding a white sheet of paper with the number 10 on it.</b></li> <li><b>4. Have two other students hold the 1 and the 9 for the number 19. Their whiteboards will also have space below these numbers for the answer.</b></li> <li><b>5. Ask students which rule this subtractions problem (74-19) is following.</b></li> </ol>

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	<p>6. Go through the steps with the students that are holding the whiteboards to show the class.</p> <ul style="list-style-type: none"> <li>• Since there is more on the floor in the ones place it follows rule 2.</li> <li>• The student that is holding the number 4 will know on Mr. 7s whiteboard. They will take the 10 away from Mr. 7. What does 7 become when we take 10 away. Answer: 6, See if any of the students can explain to you why it changes to 6 using what they know about place value.</li> <li>• Once we take the 10 and add it to 4, what does the 4 become?</li> <li>• "Now, are we able to do our subtraction?"</li> </ul> <p>7. Do the subtraction together as a class.</p>
15	<p>Explain: (concepts, procedures, vocabulary, etc.)</p> <ol style="list-style-type: none"> <li>1. Go over what the answer to a subtraction problem is called.</li> <li>2. Go over multiple examples together as a class.</li> <li>3. Use the SmartBoard to go through the problems with the students.</li> <li>4. Some of the problems include (38-19, 65-32, 50-12, 23-4, 70-38)</li> <li>5. At the beginning of each problem, ask which rule is being used.</li> <li>6. Next, ask them the first step to the problems.</li> <li>7. Go through all the steps such as just subtracting or having to borrow from the tens place.</li> <li>8. Each time they say the rule, say it out loud and review the actions, so it sticks with them.</li> <li>9. For a few of the problems, ask the students to complete them on their own first and then have a volunteer come do it at the board.</li> <li>10. Towards the end of the lesson, show the students how they can use the base-10 blocks to solve their equation.</li> <li>11. The students will get out the base 10 blocks that represent the top number. They are not allowed to just take the bottom number away and add what is left to get the answer.             <ul style="list-style-type: none"> <li>• Have the students look at the one's place first and decide if they must borrow from the tens place in order to take away the bottom number from the ones.</li> <li>• If they borrow they will bring over one of the tens which will show them automatically that their amount of tens went down by one. If we have enough base-10 blocks the students can change the 10 into single cubes or they can just subtract from the tens without taking away cubes.</li> <li>• The students will see that they now have ten more cubes in the one's place and can add those up to observe how much they now have in the one's place.</li> <li>• Now they will do their subtraction by taking away the number of cubes represented by the second number first in the ones and then do the same with the tens.</li> </ul> </li> <li>12. Students will not be required to use this method if they find it to be more confusing.</li> </ol>
10	<p>Explore: (independent, concrete practice/application with relevant learning task -connections from content to real-life experiences, reflective questions- probing or clarifying questions)</p> <ol style="list-style-type: none"> <li>1. Students will be assigned 13 practice problems including one word problem that we will set up as a class.</li> <li>2. Students will have the opportunity to use the base-10 manipulatives while they are working through some of their problems for some hands-on learning.</li> <li>3. We will go over how to use the base-10 manipulatives as a class during the explain portion, so they understand how to use them.             <ul style="list-style-type: none"> <li>• The students will share some of the base 10 manipulatives with their table partners, but they will not work together</li> </ul> </li> <li>4. For the rest of the problems, students will be asked to apply their mental strategies.</li> <li>5. This will be an independent practice.</li> <li>6. Some of the practice problems include, (50-18, 43-17, 75-18, 22-6, 60-36, 42-34)</li> <li>7. Students will set up their problem using the base-10 blocks, however, they are not going to just take away the bottom number and add up the blocks. They will have to go through the proves of subtraction.</li> <li>8. For example, for (50-18), the students will start with 5 of the tens blocks equaling 50 and 0 one's blocks. The students must start at the one's place where they will realize they cannot take 8 away from 0. They must borrow from the tens place.</li> <li>9. Now, they can take 8 away from 10 and end up with 2.</li> <li>10. Now, they will go to the 10s place to subtract. They will see that there are only 4 tens left because they had to borrow one. When they subtract, they will be asked to take another 1 away. They will be able to see that they only have 3 tens left.</li> <li>11. The answer is 32.</li> <li>12. Students are not required to use the manipulatives at all if they find that way more confusing. They are there as another tool to help them.</li> </ol>
3	<p>Review (wrap up and transition to the next activity):</p> <ol style="list-style-type: none"> <li>1. Students will show their completed problems to the teacher.             <ul style="list-style-type: none"> <li>• If the students have some incorrect, the teacher will circle them and have them look at them again.</li> <li>• The next time they come up, we will look at them together and talk through them.</li> </ul> </li> <li>2. End the lesson by reviewing the rules with their actions one more time. Challenge the students to do it without your help.</li> <li>3. Students will turn in their problems and put away their manipulatives.</li> </ol>

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4. While the students are waiting for others to finish, they may work on other assignments or will be given another activity to do after the teacher says they are ready to turn in their worksheet.

Formative Assessment: (linked to objectives, during learning)

- Progress monitoring throughout lesson (how can you document your student's learning?)

-Students will be given review problems. They will be allowed to use base-10 manipulatives for half of the problems. The students will be asked to put their manipulatives away for the other half of the problems and apply their mental strategies. The teacher will review their problems. If they had some incorrect, the teacher would circle them and have them try to do them again. The number of circled problems will show their progress.

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

-Students will be given a winter themed assessment packet that will review the strategies that they learned and require them to apply the mental strategies while completing a combination of addition and subtraction problems.

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

I thought that the lesson went very well. The students had a lot of fun learning the actions that followed their subtraction rules. If I could do this differently, I would show the actions as soon as they learned the rules. I would not wait until a later lesson because the students that learn by doing could get more out of learning it from the beginning. I watched some of the students do the actions when they worked on problems on their own rather than as a whole group. This was another indicator that it was something that helped the students understand the rules. It started out the lesson with excitement and added new learning to a topic they have already been talking about for a couple weeks. After that, we went through a skit together. A few of the students were called up to the front to go through the steps with their class. I had a 10 drawn up, so the students were able to see the 10 being given away. One of the students knocked on their neighbor's door and begged Mr. 7 to give them a 10. It was a fun little skit and I really think it sparked a fire in my students to want to participate in the lesson. If I would have had more time to do the lesson, I would have made it possible for every student to perform the skit. When we started working on the rest of the problems, we reviewed the rule that the problem was following. Students would say the rule with me and do the actions. Then I would have the students tell me the first step that we had to take to do the rule. If we had to go next door to get 10 more, we would knock on the door and beg mister number to give us a 10. The students would determine what the number in the tens place would come. For example, a 6 in the tens place would become a 5 because you took 10 away. Next, we would add ten to the one's place and determine what that number would become. A 6 in the one's place would become a 16. This went very well. I was so excited to hear the students be able to talk through the problem with me. After we did a few as a class, the students were super eager to volunteer to do a problem on the board. It was so awesome to see the students talk through their process in front of the class. If the students wanted help, they were able to ask their friends to help them talk through it. The students learned the answer to a subtractions problem. They learned how to use base-10 blocks to help them solve the subtraction problems. This was new for me and them, and I think it needs a little more practice. I think a lot of students would benefit from using the blocks if they had some more time to work with them. Overall, I thought the lesson went very well. I could tell that the students were meeting my objectives through their participation during the lesson and after checking their math problems when they were finished. The students that did get problems wrong just made simple mistakes. They were able to point out what they did wrong before I even had to go over it with them. I would spend more time on this lesson and expand the concepts throughout the whole subtraction unit. I would have the base-10 blocks out in my room, so students were able to use them if necessary towards the beginning of learning subtraction. The manipulatives would eventually be taken away once the students got better at their subtraction. Since a lot of students use their fingers right now to figure out the answer to their subtraction, I think they would be less likely to make mistakes by using the base-10 blocks because they are able to see what they are taking away and what is left over after that is done. I would definitely teach this lesson again while implementing a few of the minor changes.