2nd Grade Math Lesson

Grace Streeter

<table>
<tr><td>Grade: 2</td><td>Subject: Math – Adding Within 100</td></tr>
<tr><td>Materials:
Hundreds chart (See Appendix A)
Visual Schedule (See Appendix B)
Sticky notes (2-3 different colors) with written out math problems on them
White board
Ways to Solve Addition Problems anchor chart (optional) (Appendix C)
Dry erase markers
List of Math problems
Paper
Writing tools (pencil, crayon, etc)</td><td>Technology Needed:
Projector (if using this to display hundreds chart)</td></tr>
<tr><td>Instructional Strategies:
☐ Direct instruction
☐ Guided practice
☐ Socratic Seminar
☐ Learning Centers
☐ Lecture
☐ Other (list)
☐ Peer teaching/collaboration/ cooperative learning
☐ Visuals/Graphic organizers
☐ PBL
☐ Discussion/Debate
☐ Modeling</td><td>Guided Practices and Concrete Application:
☐ Large group activity
☐ Independent activity
☐ Pairing/collaboration
☐ Simulations/Scenarios
☐ Other (list)
Explain:
☐ Hands-on
☐ Technology integration
☐ Imitation/Repeat/Mimic</td></tr>
<tr><td>Standard
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.

Objective
By the end of this lesson, students will demonstrate their ability to choose and use different strategies to add two-digit numbers within 100 by solving problems in on the board.
Bloom’s Taxonomy Cognitive Level: Understand, Apply</td><td rowspan="2">Universal Design for Learning

Below Proficiency: Students below proficiency will receive an increase level of assistance from the educator to ensure that they understand the concepts. The teacher can also help them find a strategy that they understand that will help them accurately solve the problems. The game for this lesson also includes some easier problems so that students below proficiency can have an easier time solving the problems and can focus on finding strategies that work for them.

Above Proficiency: For students above proficiency, there is provided harder problems for them to solve. These students may also offer some assistance in helping other students find strategies if they are struggling to find one.

Modalities/Learning Preferences:
Visual: I will provide a visual schedule for students in the classroom who need it. This will help students to be able to see which part of the lesson is coming, and they will know what to expect throughout it.
Auditory: The teacher will be giving directions and talking through strategies so that students will be able to hear the directions and strategies rather than just seeing them.
Kinesthetic: Kinesthetic learners will be able to get up and move during this lesson when they are playing the math game with their team.
Tactile: Students will be able to pick up and work with the sticky notes when moving through the math activity.</td></tr>
<tr><td>Classroom Management- (grouping(s), movement/transitions, etc.)
For the game, students will be grouped into 4 groups (3 groups of 5 and 1 group of 4) – 19 students
Within their groups, <u>all students will participate</u> in the activity. Every student will solve at least one problem using a strategy of their choosing
Students will walk, not run to move between different parts of the lesson.</td></tr>
<tr><td>Behavior Expectations- (procedures/expectations specific to the lesson, rules and expectations, etc.)
Students will sit in their groups/stay in their spots and have their eyes on the teacher for directions.
Students will take turns speaking and listen to the person who is talking at all times.
Students will walk, not run to the board when picking their math problems and when answering them.</td></tr>
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	• Students will maintain a voice level of 0 when the teacher is talking, and a voice level of 2 when they are speaking.

Minutes	Procedures
1-2 min	**Set-up/Prep before lesson:** • Have the hundreds chart displayed on the board using the projector • Have all of the math problems written out on sticky notes and stuck to the board in order from least difficult to most difficult within reach of the students • Have dry erase markers up by the board • Set out Ways to Solve Addition Problems anchor chart • Write out 2 review problems on the board - 27 + 63 = 90 - 46 + 48 = 94
8-10 min	**Engage: (opening activity/ anticipatory Set – access prior learning / stimulate interest /generate questions, etc.)** ❖ "Hello class! I know that you have been working on solving addition problems using different strategies, so today, we are going to be doing some more work on adding two-digit numbers! But first, let's do some review." - Make sure that all students have paper and something to write with. ❖ Have the students all solve 1 – 2 problems on their own. Once they have had ample time to finish, have the students volunteer to come up to the board and solve the problem. Or, as you walk around the room watching them solve the problem, you can ask that student to come to the board and show their strategy. - Example problems: 27 + 63 = 90, 46 + 48 = 94 ❖ Once the students have finished solving their problem, have some of them come up to the board to solve for the class (make sure that they explain their thinking). Make sure that they highlight their strategy. ❖ Talk about how each of these strategies are valid and can be used to solve math problems. - "Did you notice that when __ solved the problem, he used a different strategy than __? Even though they used different strategies, they were both able to get the correct answer! This means that there is not just one way to get the correct answer when adding!"
5 - 6 min	**Explain: (teacher-led)** ❖ "Alright class! Now that we have reviewed adding two-digit numbers using different strategies, we can play a game that will help us practice using different strategies to solve these addition problems!" ❖ "We are going to play a game called *I've Got Your Number*! Before we play the game, I am going to model for you how to play the game and use the materials appropriately. Once I have finished explaining the game, then we will get up and play the game." ❖ Model for the students the game rules - "For this game, I will be dividing you all into 4 groups (19 students, 3 groups of 5 and 1 group of 4)" - "These sticky notes next to the hundreds chart all have math problems on them the blue sticky notes are the least difficult problems, and the orange sticky notes are the most difficult ones." - "When I say 'go,' one person from each of your groups will come up and pick a sticky not from the board and bring it back to your group. That person will be solving that problem on his/her own. If they need any help, they may ask one other team member (don't forget to show your work!) - "Once the team member who picked the sticky note solves the problem, he/she will come up to the board and put their sticky note on top of the number on the hundreds chart that matches their answer." - "After that person has put their sticky note on the answer, they must take a dry erase marker and show/explain how they solved their problem to the class." - "Once each team member representative gets a chance to show how they solved their problem, the process will repeat until every student has had a chance to solve at least 1 problem." ❖ Model for the students proper procedures for moving about the classroom. Students should: - Walk with hands to self to the board to pick their problem and back - Be a good team player when other team members are solving their problem ❖ "Does anyone have any questions about how to play the game before we begin?"
10-15 min	**Elaborate: (concreate practice/application with relevant learning task -connections from content to real-life experiences)** ❖ Allow the students to play the game following the rules that you modeled for them. ❖ Once every student has had at least 1 chance to solve a problem, bring the students' attention back to you so that you can wrap up the lesson. - "Alright everyone! It looks like everyone is having a lot of fun! Let's wrap it up and find our spots again so that we can talk about the game!"
2-5 min	**Closure (wrap up and transition to next activity):** ❖ Wrap up the lesson by drawing the students' attention to all the different strategies that the students have used to solve the problems.

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	- "Wow! That was fun everyone! Did you enjoy yourselves?" - - "Did you notice how everyone was using different strategies to solve their math problems! There is not just one way to solve these math problems, and that means that you just need to find a strategy that works for you! This doesn't just apply to the game we just played, but also to math problems you have to solve in the future!"

Formative Assessment: (linked to objective, during learning)	**Summative Assessment (linked back to standard, END of learning)**
• **Progress monitoring throughout lesson (document of student learning, data collection)** - Throughout the review part of the lesson, walk around the classroom as the students solve their problems to determine where the students are at the beginning of the lesson. - Check the student's understanding of the process and how to solve problems using different strategies throughout the *I've Got Your Number* game. Pause to talk about the different strategies as they come up throughout the game.	• Keep an eye on all the students throughout the lesson and keep track of the strategies that the students choose to use. Are they: - Using/trying at least two different strategies to solve addition problems? - Using these strategies accurately to receive correct answers to the given math problems?

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

This lesson was the one that I taught when I was being evaluated by Mrs. Hager! I had spent a lot of time preparing this lesson, and I believe that it went very well! It was my second day in Mrs. Wanner's classroom, and, based on the first day, I knew that the students had been working on solving two-digit addition problems using different strategies. The students were mainly focusing on solving these problems using the "Break Apart" and the "Number Line" methods, but I also chose to include a couple more strategies on the anchor chart that I created in case the students needed to try a new strategy. I could tell from my observation that the students could use some more practice in practicing this concept, my goal was for them to do this in a more fun way than just using another worksheet to practice.

For this activity, I still held students to the criteria that Mrs. Wanner always does. The students were to solve their math problems by using a strategy that they had learned, show their work, and get the correct answer. I incorporated movement into my lesson to give the students a chance to move while practicing math as well. I could tell that the students really enjoyed this lesson, and I know that they were more confident with the strategies for solving addition problems by the end of it.

There is always room for improvement with every lesson plan, and this one is no exception. One way that I know I could have improved was if I had moved around the room a little more rather than stayed at the front of the classroom while teaching the content for the lesson. I also could have, during the review time at the beginning of the lesson, shown the students how to complete the sample problem using both strategies that they had learned. One other way that I think I could have improved was if I had not been as timid in my classroom management. I was nervous since it was the first lesson that I was teaching in this school and in this grade, but I know that I could have done better. Other than that, I know that the lesson was a success!

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Appendix A

Hundreds Chart and Math Problems

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

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Math Problems

Easier

43 + 31 = 74
52 + 45 = 97
43 + 41 = 84
31 + 26 = 57
43 + 35 = 78
45 + 43 = 88
42 + 37 = 79
54 + 46 = 100
60 + 25 = 85
20 + 47 = 67
14 + 50 = 64
47 + 22 = 69
17 + 70 = 87
15 + 14 = 29
68 + 10 = 78
88 + 12 = 100
77 + 22 = 99
12 + 13 = 25
61 + 27 = 88
30 + 45 = 75

Harder

36 + 15 = 51
25 + 38 = 63
56 + 17 = 73
27 + 28 = 55
37 + 25 = 62
62 + 19 = 81
36 + 17 = 53
27 + 26 = 53
29 + 34 = 63
32 + 18 = 50
35 + 46 = 81
42 + 19 = 61
15 + 78 = 93
48 + 36 = 84
54 + 37 = 91
58 + 38 = 96
85 + 12 = 97
19 + 75 = 94
26 + 65 = 91
79 + 14 = 93

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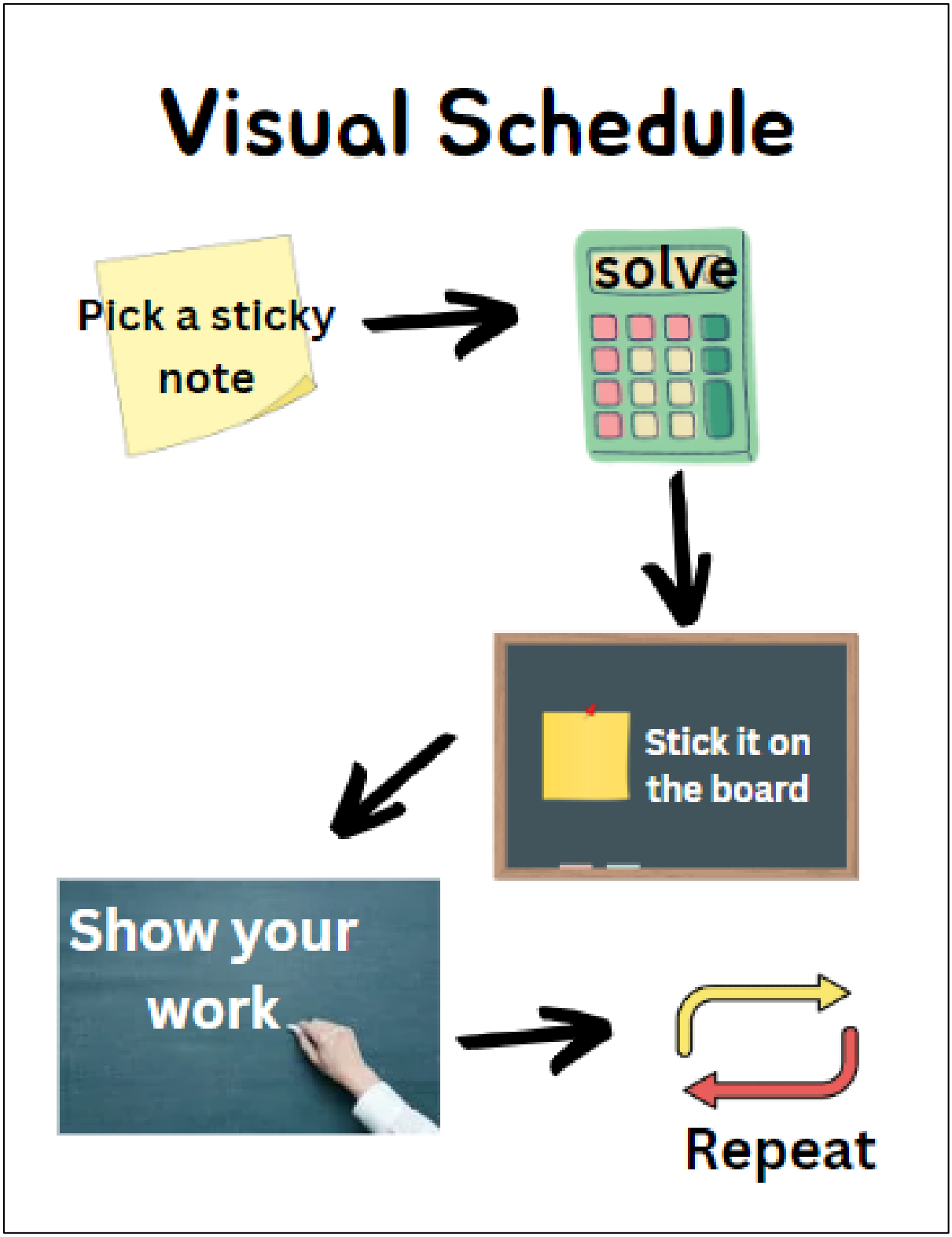
Appendix B
Visual Schedule



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Appendix C

Ways to Solve Addition Problems Anchor Chart