

Learning Plan Critique

Description of what happened:

The lesson started about fifteen minutes late due to the fact that the guided reading groups took longer to complete. Therefore, my lesson was cut down to 45 minutes instead of the 60 minutes I had planned. Nevertheless I began reviewing rounding to the nearest ten and hundred, concepts the students had learned in the two days leading up to my lesson. I reviewed the number line method and underline and circle methods. Though I had originally planned to work these methods separately, I soon found out that during the most recent math class, (which I had missed because I was in classes at the School of Education) the students used both methods simultaneously and also wrote the upper and lower boundaries differently than they had written them during the lesson I had observed on Monday. These were easy adaptations to make and I proceeded to teach the lesson. I modeled first and chose students to come up and answer additional examples, as planned.

Then I went on to teach the students how to round to the nearest thousand using both the underline and circle and number line methods simultaneously. The students had a bit of difficulty understanding that the boundaries would now be the closest thousand, so I went on to show them the number line manipulative I had created. Two students held the string and one additional student came up to place the bead where the number to be rounded would fall on the number line. I chose to have two students hold the string so that I could explain and point without having my hands connected to the string. Though the students struggled a bit with the concept of the halfway point between 1,000 and 2,000, some saying that it would be 1,050, I was able to explain that the halfway point would be 1,000 plus 1,000 divided by two. We also counted by 500s to better solidify the concept, starting at 500, then 1,000, then 1,500, and then 2,000.

After modeling rounding to thousands and having students assist me with the number line manipulative I realized that I was very low on time. I knew that I needed to go over rounding to the nearest ten and hundred with four digit numbers because this concept would appear in the rounding game I had planned. Therefore, I chose to provide examples of these problems. After going over these problems, I only had about ten minutes left and though I was going to give the practice problems as planned, my teacher and I decided to go ahead and have the students play the game. They took turns using the interactive writing pad and had a blast.

Student performance data:

Due to the fact that I only had 40 minutes to give the lesson, instead of a full hour, I had to reduce my lesson plan. With a little guidance from my cooperating teacher, I chose to move on to the online game and skip over the practice problems, believing that the students would be

more engaged with the game. Therefore, I had to remove the practice problems and problems in the journal as the lesson proceeded. The students did complete a worksheet the next day, with 95% passing rate, which proved to me that they understood my lesson and were able to apply the concepts taught to problems in which they rounded to nearest ten, hundred, and thousand. Further performance data will be collected when they take their quiz on rounding and comparing on Tuesday November 30th. Besides these summative measures I also collected formative assessment in the form of questioning, asking students to come up to solve example problems, and having the students play the game at the end of the lesson. Through these formative assessments I was able to gauge the level of understanding, which in my opinion was relatively high. These measures were more subjective than the worksheet and quiz, but still provided me with insight as to how well the students were mastering the material.

Lesson Title: Rounding to the Nearest Thousands

Context/Grade Level: This lesson is designed for a 3rd grade class at Stonehouse Elementary School. The class consists of 18 students, six of which have learning disabilities.

Objective(s): Students will round four digit whole numbers to the nearest thousand.

SOL Strand: Number and Number Sense

Focus: Place Value and Fractions

SOL: 3.1 (2009) The student will

b) round whole numbers, 9,999 or less, to the nearest ten, hundred, and thousand

Materials/Resources:

- Doc Camera and pencil/paper
- Laptop and internet
- String and bead for number line manipulative
- Math journals

Approximate time required: 1 hr

Content and Instructional Strategies:

1. Review rounding to the nearest ten and hundred that the students learned about in the previous lesson. Write 345 on paper under document camera and round to the nearest ten using number line method discussed in previous lesson. The number line method involves first determining the upper and lower boundaries (closest multiples of ten) to which the number could be rounded. When rounding 345 to the nearest, the boundaries would be 340 and 350. Then write a number line with 340 and 350 as end points and 345 as the center. Plot 345 on the number line and show that because the number falls in the center it is rounded up to 350. Also explain that due to the fact that the 5 in the ones place is greater than or equal to 5, then the number in the tens place is rounded up to 350. Ask one student to come up and round 345 to nearest hundred using same method.
2. Write 657 on paper under document camera and round to nearest ten using circle and underline method discussed in previous lesson. Then ask one student to come up and round 657 to the nearest hundred using same method.
3. Let students know that they can also round to the nearest thousand. Write 1,672 on paper under document camera and explain that rounding to nearest thousand is very similar to rounding to the nearest ten and hundred. Model rounding to the nearest thousand using the number line method. Draw number line with 1,000 and 2,000 as endpoints and 1,500 as the center mark on paper beneath doc camera. Place the number 1,672 on the number line to the right of the center mark (1,500). Explain that since the number 1,672 is to the right of 1,500 the number is rounded up to 2,000.
4. Using manipulative consisting of string, a bead, and a marker indicating the center of the line ask two students to come up to help with the demonstration. Explain that the string represents the number line and the bead represents the number that must be rounded.

Hold one end of the string, have one student hold the other end, and have the other student move the bead to represent where the number is on the number line. For example, to model 1,340 explain that the two endpoints are 1,000 and 2,000 and that the center marker represents 1,500. Ask one student to move the bead to the location of 1,340 on the number line. Ask class to describe whether 1,340 is rounded down to 1,000 or rounded up to 2,000 based on the position the number line. Students' responses should explain how since the number falls to the left of the center mark (1,500) it is rounded down to the nearest thousand (1,000).

5. Model rounding to nearest thousand using the circle and underline method from previous lesson. Round 1,672 to the nearest thousand. To use the circle and underline method, underline the digit in the thousands place and circle the digit to the right (the digit in the hundreds place). If the number to the right is less than five, the underlined number stays the same and the rest of the digits to the right of the underlined digit are changed to zeros. If the number to the right is greater than or equal to five, then the underlined number increases by one and the digits to the right of the underlined digit are changed to zeros. For the example, 1,672 underline the 1 because it is in the thousands place and circle the 6 because it is in the place to the right of the underlined digit. Since "6" is greater than 5 you must round the underlined digit up. The answer will be 2,000.
6. Give three practice problems with rounding to the nearest thousand using both the circle and underline method and numberline method, asking students to complete the problems with partners in their math journals.
7. Review rounding to nearest ten and nearest hundred now using four digit numbers. Model rounding to the nearest ten and hundred using circle and underline method. Then give two practice problems, one rounding to the nearest ten and the other rounding to the nearest hundred, which the students can work in pairs to complete.
8. Tell students that they will now use what they have learned about rounding to play a rounding game online. Open website (www.free-training-tutorial.com/rounding-games.html) in browser and model Shark Rounding Game for students. The object of the game is to select the shark with the answer to each rounding question. If the correct shark is chosen then it will explode into small pieces. Ask students to come up one at a time to play the game.
9. After playing the game, students will be given three problems to complete independently in their math journals. They will round three numbers to the nearest thousand, hundred, and ten using the underline and circle method. If students struggle with the underline and circle method, students can be given the number line manipulative to work with.

Evaluation/Assessment:

Formative assessment will take place as students come up to review rounding to the nearest ten and hundred. Additionally, students will be observed when using the number line manipulative.

At the conclusion of the lesson, the following questions will be written down for students to complete in their math journals. If students struggle they can use the number line method in addition to solidify the concept.

1. Round to the nearest thousand. Use underline and circle method.

3,450

2. Round to the nearest hundred. Use underline and circle method.

4,679

3. Round to the nearest ten. Use underline and circle method.

5,989

Differentiation and Adaptations: Students with learning disabilities can be given dry erase markers and wipe off boards to work with and given the opportunity to use the number line manipulative when completing problems. When it comes to assessment of rounding these students would benefit from numbers that are already underlined and circled. They would also benefit from being able to verbally explain how to round the numbers in place of drawing out the number line or circle/underline.

Critique: Looking back at the lesson and after chatting with my teacher once the lesson was complete, I realized that I should have included less examples and modeling. Since I knew the lesson would be cut short I should have made a decision at the beginning of the lesson to remove some of my modeling so that we would have had more time for the practice problems, rather than waiting until time ran out at the end of the lesson. However, the students did complete a practice worksheet during the next class period, which gave us the assessment data that the problems in the math journal would have provided. They also completed worksheets for homework to provide them with more experience and practice with rounding.

Reflections & Suggested Modifications for Future Use:

Overall, I was pleased with the lesson plan on paper, with the exception of the fact that I didn't know that the students had been learning the number line and underline and circle methods simultaneously and the length of the plan. Had I known that my CT had changed her way of teaching, in that she had meshed the number line and circle/underline methods together, I would have revised this aspect of my plan.

For future use, I would certainly reduce the number of examples provided and give the students more of an opportunity to interact and practice. I would also eliminate some of the review of the rounding at the beginning of the lesson to provide more time for practice problems and application of the new material.

What you learned: The lesson certainly opened my eyes up to the challenges of time restraints. I now have a better understanding of how quickly time can pass when you are focused on the lesson at hand. As I teach more and more lessons I will easily develop this sense of time. Though I knew previously the importance of thinking on your feet and making quick decisions during teaching, the lesson provided me with a first-hand experience of such quick thinking. As a teacher I must make professional decisions quickly and effectively. I was thankful to have my teacher guide me in making the professional decision to go ahead and play the game with the students. It was because of her guidance that I felt more confident in making the decision, but I also realize that I will be making those decisions solo in the months to come.

On another note, I learned a great deal about classroom management in my short 45 minutes of teaching. Since this was my first lesson it was also the first opportunity for me to use my classroom management skills. Though I had been observing the class and knew which students presented challenges to management, being in front of the classroom changed my perspective greatly. My CT made a comment to two of the boys, telling them to look at the board and pay attention during my lesson. Though I had observed her making this commentary in all of her teaching, it was a bit of an adjustment for me to change from the onlooker to the one in control. Once I heard her make the comments I was certain to call on those boys frequently and tell them to focus when it was evident that they were not paying attention. Overall the lesson was a great experience and I look forward to the teaching that is soon to come!