Teacher: Lisa M. Barbi **Cooperating Teacher:** Lindsay Avitalle	**Grade Level:** 4

<div align="center">

Adding and Subtracting Money
30-Minute Lesson Plan
Wednesday, October 7, 2014

</div>

Content and Standards:
The teacher will guide students in recognizing, evaluating, and applying addition and subtraction of money using real-world scenarios.

- **M03.D-M.1.3.1:** Compare total values of combinations of coins (penny, nickel, dime, and quarter) and/or dollar bills less than $5.00.
- **M03.D-M.1.3.2:** Make change for an amount up to $5.00 with no more than $2.00 change given (penny, nickel, dime, quarter, and dollar).
- 2.1.3.A: Apply one-to-one correspondence and number patterns to count up and
- count back and to compare values of whole numbers and values of money.
  2.2.2.B: Add and subtract single and double-digit numbers with and without regrouping, to include problems with money.
- **M4.A.2.1.2:** Solve problems involving addition or subtraction with decimals through the tenths or money to the cent and/or explain the solution. Limit to two-step problems.

Prerequisites:
- Students must know how to recognize coins and bills of various denominations.
- Students must know that the decimals indicate change (coins) and must be lined up in order to add or subtract.
- Students must know how to identify clue words in word problems to correctly identify which operation or operations must be applied.
- Students must know how to work within groups to problem solve.

Goals and Objectives:
- Students will extend prior knowledge of addition and subtraction to solve problems including money.
- Students will use manipulatives representing various types of coins and bills to make change and identify money quantities.
- Students will collaborate to solve problems adding and subtracting money with and without regrouping.
-

Instructional Procedure
- The teacher will begin the lesson with the essential questions: "What is money important?" and "Why do we need to know how to use money?", and "Why do we know how to count, add, and subtract money?".
- The teacher will have student volunteers recall experiences in which they needed to use money and explain why money is important.
- The teacher will write an addition money problem on the board and ask the students how to go about solving it.
- The teacher will write another addition with money problem on the board this time requiring regrouping.
- The teacher will explain how each problem must be solved through lining up the decimals so that the cents will be in the correct place (give the example of the decimal in wrong place causing the amount due to be greater hundred dollars instead of one dollar).
- The teacher will then model two subtractions problems with money with and without regrouping while the students work along using their copybooks.
- The teacher will then model solving a money word problem with the assistance of student volunteers.

- The teacher will break students into small groups and give each group an assignment including addition and subtraction of money problems in the workbook in addition to one word problem per group.
- The teacher will instruct the students to collaborate with group members to solve the problems and make sure that a designated student from each group can explain how and why they arrived at the solution.
- The teacher will circulate the room to assist students requiring additional help and clarification.
- The teacher will reconvene the class and ask volunteers from each group to explain the problem and provide proof to justify solutions.
- The teacher will perform an informal survey of the students to determine student understanding of money values, the importance of lining up decimals, and adding/subtracting money with and without regrouping.

Materials & Equipment:
- Smart board
- Copybooks
- Sadlier-Oxford Progress in Mathematics level 4Workbooks
- Sadlier-Oxford Progress in Mathematics Student level 4 textbook pages 82-83 (in appendix)
- Sadlier-Oxford Progress in Mathematics level 4 Teacher edition
- Word problems
- Pencils
- Paper

Assessment & Evaluation:
- The teacher will administer an informal survey to assess student understanding of money.
- The teacher will check student solutions to determine if students comprehend addition and subtraction of money with and without regrouping.

Accommodations and Modifications/Differentiation: Individualized Activities:
- The teacher will first assess the extent of prior knowledge by asking students about their understanding of what money is and how we use it to function.
- The teacher will slowly model each step of addition and subtraction of money stopping during each step to make sure the students are comprehending the processes.
- The teacher will group students by varying abilities so that peer mentoring can take place.
- The teacher will meet with each group and have them read the problem and explain the clues and hints that tell the students how to solve.
- The teacher will have distributed the more complex problems to more advanced groups and the less complex problems to groups who may struggle.
- The teacher will extend time to groups who need it while instructing the more advanced groups to work on enrichment problems in the textbook.
- The teacher will work with struggling students and assist them in identifying important clues in the problem and setting up the problems.
- After reconvening the class the teacher will model how to solve each problem with the assistance of student volunteers from each group.
- Lastly, the teacher will hold an informal survey asking the students to use a hand gesture to convey understanding or ambiguity.

Self-Assessment:
- Throughout the lesson, the teacher will use student feedback through hand gestures to determine the success of the lesson. She will circulate the classrooms and stop to informally poll each student as to his or her strengths and weaknesses in adding and subtracting money. The

LESSON PLAN REFLECTION

In creating, preparing, planning and implementing the above addition and subtraction of money lesson plan,

I carefully considered and addressed each of the components of Danielson's Framework domain 1. The initial step in

incorporating each of the components of Danielson's domain 1 was to meet with the cooperating teacher and discuss

the curricular content and core materials that should be used to create the lesson. Next, I researched the Common

Core Curriculum standards for fourth grade. Generally, these standards state that fourth grade students should be

capable of comparing total values of combinations of coins and bills, have the ability to make change of at least $5.00,

add and subtract money with and without regrouping while applying such abilities in solving real-world problems.

Once the standards were in place, I reviewed the materials and supplemental materials to bring the lesson to fruition.

Upon compiling the necessary information from the cooperating teacher, the Pennsylvania Department of Education

standards portal, and the materials, I began to contemplate the needs of the class and individual students.

The students are a diverse group who enjoy personalized interaction with the teacher, much like all other

students. In realizing this aspect of the students' personalities, I created word problems that revolved around

characters whose names were similar to some of the students in the class, for example Damien, Michael, Vienna, and

Donato. I also recognized the students' interest in playing with video games, Legos, and of course an interest in

eating ice cream, and created real-world problems that would appeal to these interests. Secondly, I considered the

needs of the students and their appreciation of collaboration, so I created a group work activity that incorporated

these real-world, personalized word problems, while encouraging collaboration and cooperation among small groups

of students with diverse learning styles. I believe this consideration of student needs made the lesson successful.

The instructional outcomes were set and derived from the student's needs, curriculum guidelines, and advice

of the cooperating teacher. Upon implementing this lesson, the instructional outcomes were tweaked depending on

the students, ability to extend prior knowledge of the adding and subtracting money and applying the necessary processes in modeling these abilities. As I implemented this lesson, my explanations, anecdotes, and modeling of the processes need to add and subtract money clearly demonstrated my knowledge of the content and resources to successfully teach this lesson. For example, some students used personal experiences to extend their knowledge of the topics and I was able to direct them to examples from the books and original word problems to validate their ability to assimilate the content.

The design of my instruction was simple, concise, supported and supplemented by the students' materials, and supplemental materials. In using the Drexel University lesson plan template, it was easy for me to create a well-designed lesson that clearly identified instructional objectives, goals, and outcomes, while enabling me to differentiate instruction as needed. Additionally, the input of the cooperating teacher and my research into the standards and core materials used in the classroom allowed me to design a coherent and successful instructional tool. As a result, designing and implementing appropriate assessment and evaluation tools was a natural outcome in creating such a successful lesson plan. Due to the fact that this was an introductory lesson in adding and subtracting money, the best assessment tools were informal surveys of individual students and the class as a whole. Also, viewing the students' copybook work and checking the homework on the next day, enabled me to evaluate the success of this lesson plan.

Appendix 1: Original Word Problems

Group Work Word Problems: Solving Money Problems

Group 1: John received $15.25 for babysitting on Friday night and $17.75 for babysitting on Saturday night. How much did he make in total?

Group 2: Vienna wanted to buy the new Mario Brothers game at Game Stop. She had $45.00 to spend. The new Mario Brothers game cost $24.75. She also saw a used game for her DS that cost $12.25. How much will it cost in all for Vienna to buy both games? If she can buy both games, how much money will she have left?

Group 3: Damien has $25.00 to spend at Toys R Us to buy a new Lego set. He buys a Lego set for $15.83. How much money does he have left over?

Group 4: Donato wants to buy ice cream for himself and his two friends, Bobby, and Michael. Donato has $10.00 to buy ice cream. If Bobby picks a chocolate ice cream cone that costs $3.50, and Michael picks an ice cream sundae that costs $4.00, how much is left for Michael to buy ice cream for himself?

Appendix 2: Student Textbook Page 82

2-8 Add and Subtract Money

Update your skills. See page 6.

Suppose you bought a racquet for $54.59 and a pair of tennis shoes for $42.40. How much money would you spend in all? How much more would you pay for the racquet than the shoes?

Round to estimate the sum:

$50.00 + $40.00 = $90.00

Round to estimate the difference:

$50.00 − $40.00 = $10.00

To find how much in all, add: $54.59 + $42.40 = n

To find how much more, subtract: $54.59 − $42.40 = x

```
  $54.59
+  42.40
  $96.99
```

You would spend $96.99 in all.

> Adding and subtracting money is like adding and subtracting whole numbers. Just write the $ and . in the answer.

```
  $54.59
−  42.40
  $12.19
```

You would pay $12.19 more for the racquet.

> $96.99 is close to $90.00. The answer is reasonable.

> $12.19 is close to $10.00. The answer is reasonable.

Study these examples.

```
  $304.98       $32.50        $9.98         $7.24         $.65
+  632.01     +  6.27       −  .41        +  .05        −  .62
  $936.99       $38.77        $9.57         $7.29         $.03
```

> This 0 must be written.

82 Chapter 2

Appendix 3: Student Textbook Page 83

Use rounding to estimate. Then add.

1. $.18 + .20	2. $.24 + .34	3. $.50 + .38	4. $.51 + .25	5. $7.23 + 2.55
6. $4.21 + 1.75	7. $2.22 + 6.37	8. $17.26 + 12.73	9. $50.62 + 24.15	10. $71.40 26.48
11. $324.16 + 613.41	12. $711.90 + 130.06	13. $244.87 + 35.12	14. $510.45 + 73.23	

15. $471.05 + $315.62   16. $523.43 + $56.45

Use rounding to estimate. Then subtract.

17. $.84 − .62	18. $.66 − .44	19. $.39 − .19	20. $8.95 − 4.51	21. $7.55 − 2.10
22. $4.67 2.64	23. $3.95 1.85	24. $78.89 − 74.13	25. $56.39 − 15.25	
26. $678.54 − 435.32	27. $783.66 − 572.55	28. $445.78 − 33.65	29. $976.85 56.44	

30. $885.64 − $763.51   31. $594.57 − $63.32

Problem Solving

32. Lauren had $15.95. She bought a pedometer for $4.75. How much money did she have left?

33. Ana bought a bike helmet for $32.25 and elbow pads for $15.60. How much did she spend in all?

Chapter 2   83

Appendix 4: Artifact 1

$$\begin{array}{r} \$3.50 \\ +\ \$4.00 \\ \hline 7.50 \end{array} \qquad \begin{array}{r} \$10.00 \\ -\ \$7.50 \\ \hline 2.50 \end{array}$$

change 2 dollars 2 quarters $2.50

1.) $\begin{array}{r} 18 \\ +20 \\ \hline 38¢ \end{array}$

2.) $\begin{array}{r} 24 \\ +34 \\ \hline 58¢ \end{array}$

3.) $\begin{array}{r} 50 \\ +38 \\ \hline 88¢ \end{array}$
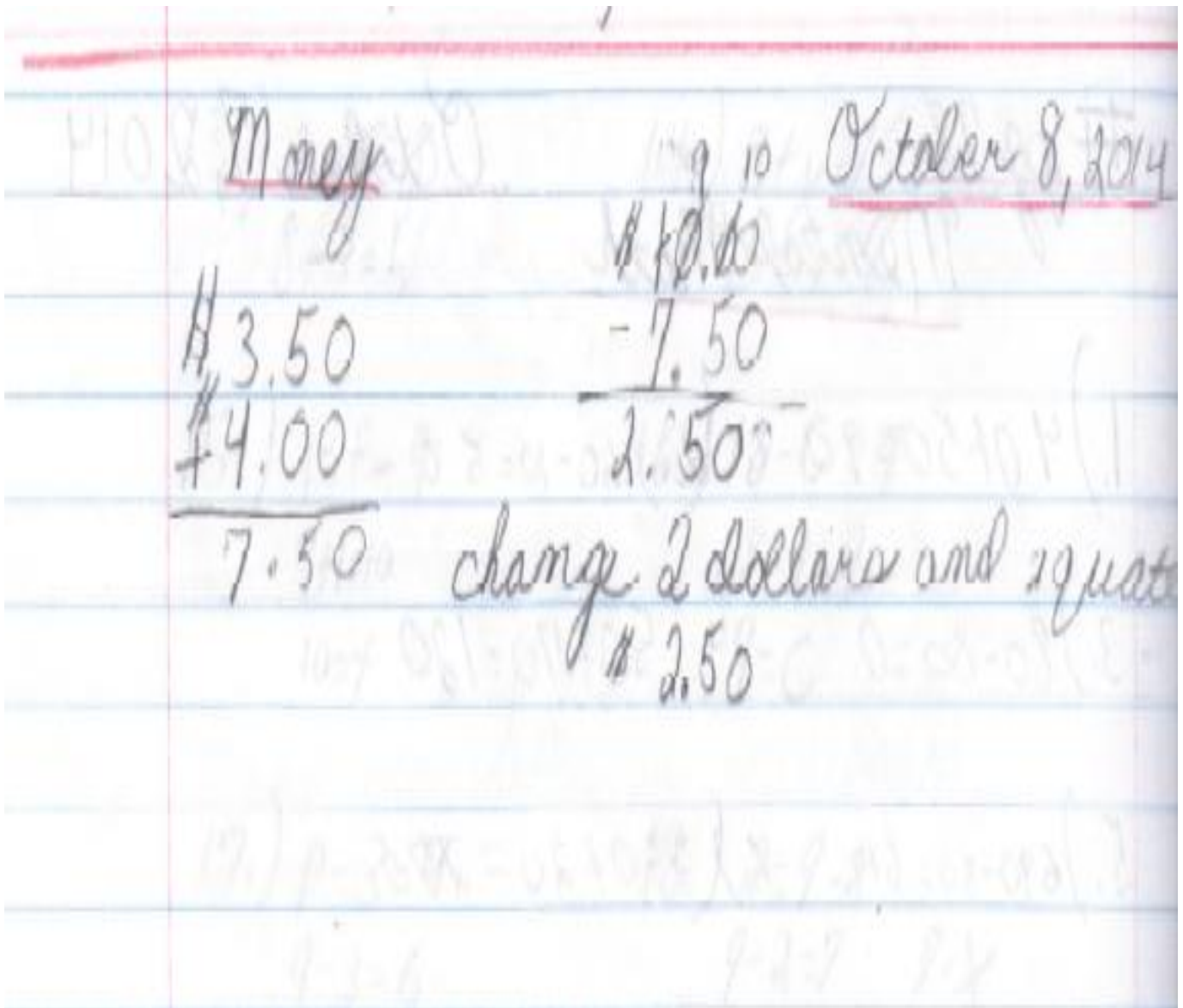
4.) $\begin{array}{r} 51 \\ +25 \\ \hline 76¢ \end{array}$

5.) $\begin{array}{r} \$7.23 \\ \$2.55 \\ \hline \$9.78 \end{array}$

11.) $\begin{array}{r} 741.13 \\ +206.64 \\ \hline 947.77 \end{array}$

12.) $\begin{array}{r} 142.18 \\ +226.71 \\ \hline 368.89 \end{array}$

Appendix 5: Artifact 2

pg 83

1.) 18¢
   + 20¢
   ────
     38¢

2.) 24¢
   + 34¢
   ────
     58¢

3.) 50¢
   + 38¢
   ────
     88¢

4.) 51¢
     25¢
   ────
     86¢

5.) $7.23
   + 2.55
   ────
   $9.78

21

11.) $741.13
    + 206.64
    ──────
    $947.77

12.) $226.71
    + 142.18
    ──────
    $368.89

Appendix 6: Artifact 3

References:

C. Danielson. (2013). The Framework for Teaching Evaluation Instrument. Retrieved on

October 12, 2014 from www.danielsongroup.org.

Pennsylvania Department of Education. (2014). Standards Aligned System. Retrieved on October 12, 2014

from http://www.pdesas.org/.