

<p>Teacher: Lisa M. Barbi Cooperating Teacher: Lindsay Avitalle</p>	<p>Grade Level: 4</p>
<p>Adding and Subtracting Money 30-Minute Lesson Plan Wednesday, October 8, 2014</p>	
<p><u>Content and Standards:</u> The teacher will guide students in recognizing, evaluating, and applying addition and subtraction of money using real-world scenarios.</p> <ul style="list-style-type: none"> • 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. 	
<p><u>Prerequisites:</u></p> <ul style="list-style-type: none"> • 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. 	
<p><u>Goals and Objectives:</u></p> <ul style="list-style-type: none"> • 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. • 	
<p><u>Instructional Procedure</u></p> <ul style="list-style-type: none"> • 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 4 Workbooks
- 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

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

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Update your skills. See page 6.

Add and Subtract Money

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:

$$\$50.00 + \$40.00 = \$90.00$$

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

\$54.59
+ 42.40
\$96.99

You would spend \$96.99 in all.

Round to estimate the difference:

$$\$50.00 - \$40.00 = \$10.00$$

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

\$54.59
- 42.40
\$12.19

You would pay \$12.19 more for the racquet.

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

\$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.

$\begin{array}{r} \$304.98 \\ + 632.01 \\ \hline \$936.99 \end{array}$	$\begin{array}{r} \$32.50 \\ + 6.27 \\ \hline \$38.77 \end{array}$	$\begin{array}{r} \$9.98 \\ - .41 \\ \hline \$9.57 \end{array}$	$\begin{array}{r} \$7.24 \\ + .05 \\ \hline \$7.29 \end{array}$	$\begin{array}{r} \$65 \\ - .62 \\ \hline \$0.38 \end{array}$
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This 0 must be written.

82 Chapter 2

Appendix 3: Student Textbook Page 83

Use rounding to estimate. Then add.

$$\begin{array}{r} 1. \quad \$1.18 \\ + \quad .20 \\ \hline \end{array} \quad \begin{array}{r} 2. \quad \$2.24 \\ + \quad .34 \\ \hline \end{array} \quad \begin{array}{r} 3. \quad \$5.50 \\ + \quad .38 \\ \hline \end{array} \quad \begin{array}{r} 4. \quad \$5.51 \\ + \quad .25 \\ \hline \end{array} \quad \begin{array}{r} 5. \quad \$7.23 \\ + \quad 2.55 \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad \$4.21 \\ + \quad 1.75 \\ \hline \end{array} \quad \begin{array}{r} 7. \quad \$2.22 \\ + \quad 6.37 \\ \hline \end{array} \quad \begin{array}{r} 8. \quad \$17.26 \\ + \quad 12.73 \\ \hline \end{array} \quad \begin{array}{r} 9. \quad \$50.62 \\ + \quad 24.15 \\ \hline \end{array} \quad \begin{array}{r} 10. \quad \$71.40 \\ + \quad 26.48 \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad \$324.16 \\ + \quad 613.41 \\ \hline \end{array} \quad \begin{array}{r} 12. \quad \$711.90 \\ + \quad 130.06 \\ \hline \end{array} \quad \begin{array}{r} 13. \quad \$244.07 \\ + \quad 35.12 \\ \hline \end{array} \quad \begin{array}{r} 14. \quad \$510.45 \\ + \quad 73.23 \\ \hline \end{array}$$

15. $\$471.05 + \315.62

16. $\$523.43 + \56.45

Use rounding to estimate. Then subtract.

$$\begin{array}{r} 17. \quad \$8.84 \\ - \quad .62 \\ \hline \end{array} \quad \begin{array}{r} 18. \quad \$6.66 \\ - \quad .44 \\ \hline \end{array} \quad \begin{array}{r} 19. \quad \$3.39 \\ - \quad .19 \\ \hline \end{array} \quad \begin{array}{r} 20. \quad \$8.95 \\ - \quad 4.51 \\ \hline \end{array} \quad \begin{array}{r} 21. \quad \$7.55 \\ - \quad 2.10 \\ \hline \end{array}$$

$$\begin{array}{r} 22. \quad \$4.67 \\ - \quad 2.64 \\ \hline \end{array} \quad \begin{array}{r} 23. \quad \$3.95 \\ - \quad 1.85 \\ \hline \end{array} \quad \begin{array}{r} 24. \quad \$78.89 \\ - \quad 74.13 \\ \hline \end{array} \quad \begin{array}{r} 25. \quad \$56.39 \\ - \quad 15.25 \\ \hline \end{array}$$

$$\begin{array}{r} 26. \quad \$678.54 \\ - \quad 435.32 \\ \hline \end{array} \quad \begin{array}{r} 27. \quad \$783.66 \\ - \quad 572.55 \\ \hline \end{array} \quad \begin{array}{r} 28. \quad \$445.78 \\ - \quad 33.65 \\ \hline \end{array} \quad \begin{array}{r} 29. \quad \$976.85 \\ - \quad 56.44 \\ \hline \end{array}$$

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?



Appendix 4: Artifact 1

Co

$$\begin{array}{r}
 \$3.50 \\
 + \$4.00 \\
 \hline
 7.50
 \end{array}$$

$$\begin{array}{r}
 0.91 \\
 \cancel{\$10.00} \\
 - \$7.50 \\
 \hline
 2.50
 \end{array}$$

change 2 dollars, 2 quarters \$2.50

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

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

3.) $\begin{array}{r} 50 \\ +38 \\ \hline 88 \phi \end{array}$

4.) $\begin{array}{r} 51 \\ +25 \\ \hline 76 \phi \end{array}$

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

11.) $\begin{array}{r} 741.13 \\ +2066.4 \\ \hline 947.77 \end{array}$

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

Appendix 5: Artifact 2

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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.)
$$\begin{array}{r} 51¢ \\ + 25¢ \\ \hline 86¢ \end{array}$$

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

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

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

Appendix 6: Artifact 3

Y10 Money 10 October 8, 2014

\$10.00
- 3.50

\$6.50

\$4.00
- 7.50

2.50

7.50 change 2 dollars and 25 cents
\$2.50