

Backward Design Unit

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1st Grade Math
Implementation: February 2011

Money
Design Date: Fall 2010

Standards

2.1.1.A Demonstrate the relationship between numbers and quantities, including place value, one-to-one correspondence, rote counting, counting by twos to 20, counting by tens and fives and comparing values of whole numbers up to 100.

2.1.1.B Represent equivalent forms of the same number through the use of pictures and concrete objects, (including penny, nickel, dime, and quarter) up to 100.

2.1.3.E Count, Compare, and make change using a collection of coins and one dollar bills.

Enduring Understandings

Bills and coins have value.

Money can be counted in different ways. When counting money, it is usually easier to start with the greatest amount.

Different coins can be used to represent the same amount.

Essential Questions

What is the value of money?

How can a set of coins be counted to find the value of the set?

How can you show the same amount using different coins?

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Content Outline

Vocabulary: skip count, in all, fewer, equals, penny, cent, nickel, value, dime, quarter, half dollar, dollar

1. Penny

Value of a penny and counting sets of pennies.

2. Nickel

Value of a nickel and counting sets of coins that include pennies and nickels.

3. Dime

Value of a dime and counting sets of coins that include pennies, nickels, and dimes.

4. Quarter

Value of a quarter and counting sets of coins that include pennies, nickels, dimes, and quarters.

5. Half Dollar and Dollar

Value of a half dollar and dollar and counting sets of coins that include pennies nickels, dimes, quarters, half dollars and dollars.

6. The value of a set of coins

8. Comparing sets of coins

7. Equivalent amounts in coins

Performances (*The students will be able to...*)

-Identify the name and value of a penny, nickel, dime, quarter, half dollar, and dollar.

- Count, compare, and record the value of a collection of coins up to one dollar.

- Count coins and make purchases in real life situations.

- Use different sets of coins to represent the same amount of money (up to one dollar).

Performance Tasks

What Am I?

1. Children must identify the name of each coin and its value. Use real coins and assess using a rubric.

Pass the Cup

2. Children will sit in a circle and each be given a cup with coins labeled A-V. Each cup will have a different amount of money inside. The children will have an answer sheet with a designated line for each labeled cup. The children will each start with a different cup of coins, count the coins, and record their answer on the corresponding letter line. After a minute or so, the teacher will ring a bell and they will all pass their cup to the right. Repeat until each child has received and counted cups A-V. Collect answer sheets and assess for accuracy.

Miss Carozza's Market

3. Children will earn fake money for various reasons throughout the unit (attentiveness, hard work, helping another student or teacher, good behavior...) To culminate the unit, a store will be set up where students can use the money they earned to purchase items such as pencils, erasers, snacks, etc... Each child will be responsible for keeping track of their money, counting their money, and purchasing items. Children will take turns acting as the clerk and receive teacher support in making change. Students will reflect on their earnings and their purchases. (W)(H)(R)(T)

All the performance tasks align with Stage One. This one appears to align with all the EUs!

Other Evidence

1. "To market, To market" – On paper, a set of coins is shown and the children need to decide which product they can buy from the given choices. (A store window is shown with products and price tags.)
2. Equivalent Coins/Comparing Coins Word Problem Quiz – 10 item multiple choice (built with a test blue print)

Quick Checks:

1. Diagnostic Assessment - skip counting skills quiz
2. After each coin is learned, assess with a three question exit slip requiring the students to

recognize the coin, it's worth, and count a set of coins using the newly learned coin along with previously learned coins.

Informal Assessment

1. Questioning
2. Teacher/student dialogue
3. Student/student dialogue
4. Observation

Student Self-Assessment and Reflection

1. Reflection on purchases at Miss Carozza's Market.
2. Questioning and student/teacher dialog after each lesson about our EQ's of the unit.

Learning Experiences (WHERE TO)

- ◆ Play the song, *Money, Money, Money*, by Abba, to grasp the students' attention. Create a word web on the board surrounding the word, money, and have children recall what they have previously learned about money from kindergarten and from personal experiences. Discuss essential questions for the unit. Explain Miss Carozza's Market. (W)(H)
- ◆ Using jumbo coins, fake coins for each student, and real coins, display each and discuss the value. Model, review, and practice how to count by ones, fives, tens, twenty five and fifty when counting each. Connect skip counting to coin counting. Model and practice with each coin.(E)
- ◆ Teach value songs: (H)(E)

*Penny, penny, easily spent -
Copper brown and worth one cent.*

*Nickel, Nickel, thick and fat.
It's worth 5 cents – I know that.*

*Dime, dime, little and thin.
I remember – you're worth 10.*

*Quarter, quarter, big and bold.
It's worth 25 – I am told!*

5 pennies make a nickel

*2 nickels make a dime
2 dimes and a nickel make a quarter
every time.
4 quarters make a dollar
and that is quite a lot.
A dollar is exactly how much money
I have got!*

- ◆ Model and have the children use fake money to practice counting sets of like coins and different coins. Begin with pennies and progress toward higher value coins. (E)
- ◆ Display a set of magnetic coins on the board and have the children decide which coin you would start with when counting the set. Have the children explain why. Repeat several times.
- ◆ <http://www.ixl.com/math/grade/first/> Have students work in the computer lab on the listed website. They will practice identifying money, counting money, and answering word problems about money. Students who are excelling can extend onto second grade money skills. Students that need remediation can practice kindergarten skills and/or receive one on one instruction while other students are working on the computers. (T)(E)(H)(E)
- ◆ Give children a bag of coins. Hold up various items with a price tag attached and have them show that amount with their coins. (E)
- ◆ “Alexander Who Used to Be Rich Last Sunday” Read aloud and discuss how his money was spent. Have the children make a connection to the story by thinking of a time when they had money to spend. (E)
- ◆ Price Tags – Give each small group several objects with attached price tags and each child a bag of money. Have them flip over one price tag at a time and show that amount of money with their coins. Have children share what coins they used to show the amount and compare with how another student may have used different coins to show the same amount. (E)
- ◆ Would You Rather Have? Glue fake money to colored index cards. Turn all of the cards face down as if it were a game of Memory. A child must turn over the two cards at the same time and decide which cards show the higher amount. Students will work with a partner to play. (E)
- ◆ Play “I Have, Who Has” money game for first grade. (E)
- ◆ Equivalent Partners – Glue fake coins to colored index cards and write amounts of money on index cards. Give half of the class a card with coins and half of the class a card with the corresponding money amounts. The children must talk to each other about their cards until they find their partner. For example, one child will have a card with two dimes and a nickel glued to the card. His/her partner will have a card that says 25 cents. Repeat the game, but this time each child will have coins on their card. They will have to find their partner who has an equivalent amount of coins. For example, one child may have two dimes and a nickel and their partner will have a quarter on their card. Once everyone has found their partner, share and reflect on the activity. (What was easy? What was difficult? Was it harder when both children had coins?) (E)(R)(E)

Name: _____

Coin Identification and Value Rubric

	Identification of Coin	Identification of Value	
Penny	1 pt.	1 pt.	____/2
Nickel	1 pt.	1 pt.	____/2
Dime	1 pt.	1 pt.	____/2
Quarter	1 pt.	1 pt.	____/2
Half-dollar	1 pt.	1 pt.	____/2
Dollar	1 pt.	1 pt.	____/2
			TOTAL ____/12

Name: _____

Miss Carozza's Market Self Assessment

How much money did you have? _____ cents

How did you earn your money?

What did you buy?

Item #1 _____ cents

Item #2 _____ cents

Item #3 _____ cents

Item #4 _____ cents

Item #5 _____ cents

Item #6 _____ cents

How much did you spend in all? _____cents

Were you able to count your money by yourself when making your purchases? (Circle one)

Yes No

How did you feel about shopping at the market?
(Circle one.)



I really liked shopping at the market.



It was okay.



I disliked shopping at the market.

How do you feel about your money counting skills?
(Circle one.)



I am very good at counting money.



I could use a little more practice counting money.



I could use a lot more practice counting money.

Reflection

UBD is not just hoping that the light bulb goes off for our students, but as the teacher we must be the one to flip the switch. We must plan instruction so that the children grasp a deeper understand and have that “Aha” moment.

Working with UBD has changed the way I plan for my classroom. It has challenged me to think about why I am teaching my children the content I present each and every day. For example, I recently was planning for an observation by my building principal. She was coming in to see a lesson on the life cycle of a butterfly. The science lesson integrated perfectly into my literacy unit because our story for the week was a non-fiction piece on butterflies. However, I challenged myself to use what I learned in class and through readings to think about what I really wanted my students to take away from my lesson. Did I really care if they memorized each stage in the life cycle of a butterfly? No. My goal was for the children to understand that animals, insects, and plants in nature grow and change. I realized I had just developed an EU for my butterfly unit.

[Yes you did...Way to go!!!](#)

I am aware that the jobs my first graders will pursue after they graduate do not exist yet in our society today. Therefore, it is important to teach my children to be “thinkers” instead of parrots that can recite memorized facts. [Exactly!!! I couldn't agree more!](#) This idea is the basis of UBD framework.

UBD is the focus of the secondary education leadership cadre in my district. I am sure that it will be the elementary focus within the next two years. As a member of the cadre, I look forward to continuing to build my knowledge of UBD so I can share this educational curriculum framework with my colleagues. [Excellent!!! You might be interested in the “Big Ideas” web site that is listed in External Links. Grant Wiggins has numerous resources!](#)

COLLEGE OF EDUCATION AND HUMAN SERVICES
Curriculum Development and Evaluation
ED 523
CURRICULUM UNIT EVALUATION

Note: Points will not be assigned for items that are not addressed.

Degrees of Performance Ms. Carozza

Performance Indicators	Sophisticated 4	Skillful 3	Developed 2	Literal 1
1.0 Stage One: Desired Results				
1.1 Standards 4	Appropriate PDE Standards are included			Appropriate PDE Standards are not included
1.2 Enduring Understandings 4	Insightful representation of the Understandings that clearly relate to the critical underpinnings of the CU (Curriculum Unit)	Relevant representation of the Understandings that relate to the underpinnings of the CU (Curriculum Unit)	Plausible, yet limited representation of the Understandings that somewhat relate to the underpinnings of the CU (Curriculum Unit)	Superficial representation of the Understandings that demonstrate a fragmented relation to the underpinnings of the CU (Curriculum Unit)
1.3 Essential Questions 4	Insightful identification of the Essential Questions that explicitly underscores the essence of the CU and promotes upper level cognitive processing	Relevant identification of the Essential Questions that underscores the essence of the CU and helps to promote upper level cognitive processing	Plausible, yet limited identification of the Essential Questions that somewhat underscores the essence of the CU and attempts to promote upper level cognitive processing	Superficial identification of the Essential Questions that demonstrate an overly simplistic relation to the CU without clear evidence demonstrating the promotion of upper level cognitive processing
1.4 Content Analysis 4	Thorough and systematic delineation of the CU content	Relevant delineation of the CU content	Reasonable, yet limited delineation of the CU content	Simplistic delineation of the CU content
1.5	Explicit and	Relevant	Reasonable,	Literal design

Performances, Anchors, Eligible Content (Interdisciplinary where applicable) 4	complete design and identification of the performances, anchors, and eligible content. Well articulated interdisciplinary connections where appropriate.	design and identification of the performances, anchors, and eligible content. Appropriate interdisciplinary connections where applicable.	yet limited design and identification of the performances, anchors, and eligible content. Plausible, yet limited interdisciplinary connections.	and identification of the performances, anchors, and eligible content. Uncritical interpretation of interdisciplinary connections.
2.0 Stage Two: Assessment Evidence				
2.1 Performance Tasks 4	Critical and systematic design of performance tasks that clearly exemplify multiple measures.	Relevant design of performance tasks that reflect multiple measures.	Reasonable, yet limited design of performance tasks that may or may not reflect multiple measures.	Underdeveloped design of performance tasks.
2.2 Other Evidence 4	Thorough and complete identification of on-going assessments.	Relevant identification of on-going assessments.	Plausible, yet limited identification of on-going assessments.	Underdeveloped identification of on-going assessments.
2.3 Authentic Performance Tasks 4	Highly creative design of authentic/real life tasks.	Relevant design of authentic/real life tasks.	Plausible, yet limited design of authentic/real life tasks.	Superficial design of authentic tasks.
2.4 Rubric 4	In-depth and detailed interpretation of performance indicators and levels of performance.	Relevant interpretation of performance indicators and levels of performance.	Reasonable, yet limited interpretation of performance indicators and levels of performance.	Superficial interpretation of performance indicators and levels of performance.
2.5 Student Self-Assessment 4	Opportunity/ies for student self-assessment are infused			Opportunity/ies for student self-assessment are not infused
3.0 Stage Three: Learning Plan				

3.1 Learning Activities and Instruction 4	Strategic design of learning activities that provide meaningful engagement and effectiveness.	Relevant design of learning activities that provide for engagement and effectiveness.	Plausible, yet limited design of learning activities that may or may not provide for engagement and effectiveness.	Uncritical design of learning activities.
3.2 WHERTO 4	Identification of WHERTO elements.			WHERETO elements are not identified
4.0 Overall Design:				
4.1 Alignment 4	Proficient and savvy articulation of all CU components.	Relevant articulation of all CU elements.	Reasonable, yet limited articulation of all or many CU elements.	Incomplete articulation of CU elements.
4.2 Six Facets of Understanding 4	Systematic design of instruction and assessment that reflects the Six Facets of Understanding.	Relevant design of instruction and assessment that reflects the Six facets of Understanding.	Plausible, yet limited design of instruction and assessment that may or may not reflect the Six Facets of Understanding.	Superficial design of instruction and assessment in regard to the Six Facets of Understanding.
4.3 Variety of Resources 4	Varied resources are incorporated into the CU.			Limited or no resources are incorporated into the CU.
4.4 Grammar and Mechanics 4	Grammar and mechanics are impeccable with a maximum of 1 error.	Grammar and mechanics reflect 2-3 errors.	Grammar and mechanics reflect 4-5 errors.	Grammar and mechanics reflect more than 5 errors.
4.5 Professionalism 4	The overall design of the CU reflects a high degree of preparation and organization.	The overall design of the CU reflects a high moderate degree of preparation and organization.	The overall design of the CU reflects a low moderate degree of preparation and organization.	The overall design of the CU reflects a low degree of preparation and organization.
5.0 Reflection:				
5.1 Self-	In-depth and	Relevant	Plausible, yet	Superficial

Reflection 4	insightful evaluation of the designer's own work.	evaluation of the designer's own work.	limited evaluation of the designer's own work.	evaluation of the designer's own work.
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