

Academic Standards:

- Mathematics Standard –Numbers, Number Systems and Number Relationships – 2.1.3 – A.
Count using whole numbers and by 2's, 3's, 5's, 10's, 25's, and 100's
- Mathematics Standard –Numbers, Number Systems and Number Relationships – 2.1.3 – C.
Represent equivalent forms of the same number through the use of concrete objects, drawings, word names, and symbols.
- Mathematics Standard –Numbers, Number Systems and Number Relationships – 2.1.3 – E.
Count, compare, and make change using a collection of coins and one-dollar bills.
- Mathematics Standard –Numbers, Number Systems and Number Relationships – 2.1.3 – G. Use concrete objects to count, order and group.
- Mathematics Standard –Mathematical Problem Solving and Communication – 2.5.3 – A. Use appropriate problem-solving strategies (e.g., guess-and-check, working backwards).
- Mathematics Standard –Statistics and Data Analysis – 2.6.3 – A. Gather, organize, and display data using pictures, tallies, charts, bar graphs, and pictographs.

Objectives:

- The students will name various coins and their amounts.
- The students will be able to create, record, and explain equal amounts of money using different combinations of coins.

Cross-Curricular Integration: Language arts

Materials: Big coins, coin transparency, hundreds chart transparency, Amount A and B transparency, Money Recording Board transparency, bags of money for each student, copy of the Money Recording Board for each student, copies of hundreds chart

Vocabulary: n/a

Instructional Procedures:

Anticipatory Set:

- Remind the students that they have been learning about the names and amounts of money. To see if the students remember this, show the students the coin transparency. Have the students identify each coin and the amount that each coin is worth. Write the amount of each coin on the line underneath its picture.

- Use the number line to count by coins. For example, start with nickels and count by 5s up to 15. Then, switch to dimes (counting by 10s from 15 to 45). Next, count by pennies from 45 to 50. Last, count by quarters from 50 to 100.
- Tell the students that they will practice finding equal amounts of money in today's lesson.

Developmental Activities:

- Using the Amount A and B transparency, draw one quarter, one nickel, and one penny under Amount A. Draw one quarter, one nickel, and three pennies under Amount B.
 - Have the students count each amount.
 - Ask the students if each side has the same amount.
 - Ask the students which amount is worth more.
 - Challenge the students to find a way to make the amounts equal by moving one coin.
- Explain to the students that because it is November 29, you want them (as a class) to try to find three ways to make 29 cents using different combinations of coins. (The students may use coins to figure this out.)
 - Give the students time to think of one of the combinations.
 - Once a student shares a combination, have that child go the blackboard. This student will show and explain his/her combination on the board using the big coins. Then, this student will count the money in the combination to make sure that the combination equals 29 cents. If the combination works, record that student's answer on the Money Recording Board transparency.
 - Have students share different combinations (until three correct ways are shown), check their answers, and record the combinations on the transparency.
- Tell the students that you have 15 cents in your pocket. Explain that you want the students to find every combination that the 15 cents could be made in your pocket.
- Give the following directions for the activity:
 - The students will work in pairs (assigned by the teacher).
 - Each pair will be given a bag of coins and a recording sheet. They may use a hundreds chart if they wish.
 - The students will work together to find every possible way to make 15 cents.
 - Once the pair finds an amount that equals 15 cents, the students will record the number of each coin used to create that combination on the recording sheet just as shown in the November 29 activity.

- The students will have 10 minutes to find all of the possible combinations. (Set a timer to keep track of the time.)
- When ten minutes passes and the timer goes off, the pairs of students will take turns sharing and explaining one of the combinations that they made. Once every group has a chance to share a combination, the students will be allowed to share more combinations.
- Remind students to: (1) be respectful and work together (2) use indoor voices
- Break students into pairs, hand out coins and the recording sheet, and allow students to begin the activity.
- Circulate around the room to assess students, keep students on task, and answer students' questions.

Closure:

- Have each pair share and explain one combination that they made.
 - Every pair will go to the board in order to show that specific combination using the big coins (just as it was done in the November 29 activity).
 - Count each combination as a class to check to make sure it equals 15 cents.
 - Then, record these combinations using the recording sheet transparency.
- Discuss with the students that there are many ways to make equal amounts of money.
- Show students the coins that were in your pocket to make 15 cents.
- Have students clean up their coins and turn in their recording sheets for assessment.

Extension/Enrichment:

- The students can practice using money in a real context at the Puppet Store. Give each student a brown paper bag and tell them that they will create their own puppet. The students are only given one dollar to spend at the store. The brown paper bag, in addition to, crayons, staples, pens, scissors, and tape are free of charge. At the store, the students can pick up a Puppet Planning sheet. This sheet shows all of the items that the students can buy to create a puppet. The students will use this sheet to plan the items that they can buy with the one dollar. They will also figure out how much money they will have left over. Then, the students can use the planning sheet to shop at the Puppet Store. (The planning sheets can be used as an assessment tool.) Once the students buy their items, they can build their puppet.

Assessment:

- Observe students' ability to name the coins and each coin's amount.
- Use observation and anecdotal records to assess students' ability to create equal amounts of money using different combinations of coins.
- The recording sheets can be collected to further assess the groups' combinations.

Special Needs Adaptations:

- This lesson already aides a child with a visual impairment because a recording board is used (by the teacher and the student) which helps organize the written work/data. This lesson also gives a child with this disability a buddy to work with. (They would be placed in the front of the room so that the special needs child would have an easier time seeing the transparencies and items placed on the blackboard.) To further assist this student, the teacher could make sure to write larger on the transparencies and could make larger coins for the teacher and student to use throughout the lesson.

Technology Integration:

1. You have **no computer** in your classroom (but you may have an overhead, TV/VCR/DVD).
 - The charts and pictures of coins from the lesson at <http://www-tc.pbs.org/teachers/mathline/lessonplans/pdf/esmp/money.pdf> will be printed onto transparencies so that all of the information is organized and so that all of the children can see what is being done throughout the lesson.
2. You have **one computer** in your classroom--a **teacher station** online to the Web with large screen projection capability.
 - As the class shares their answers to the activity, the teacher can record all of the combinations on a spreadsheet. This could be projected onto a screen so that all of the students could easily see the results in an organized way.
3. You have a **teacher station** in your classroom online to the Web with large screen projection capability. You also have a **cluster of 6 computers** in your classroom, each computer online to the Web, with a computer-to-student ratio of 1:4.
 - When the groups of students complete their work early, they can play a matching game at http://www.harcourtschool.com/activity/con_math/g03c07.html to practice finding equivalent amounts of money.
4. You have a **computer lab** reserved for your class once a week with one computer per student, each computer online to the Web.

- The students can type a story using *Word* about their puppet that was bought/made at the Puppet Store.
5. You have a **teacher station** in your classroom online to the Web with large screen projection capability. **Every student also has a laptop computer** for one-to-one computing.
- Each student will explore the information and games pertaining to money from the website <http://www.usmint.gov/kids/>.