

Title: BANKING

Brief Overview:

Banking is an integral extension of the 6th Grade unit on decimals. Students will be able to use their knowledge of writing decimals, adding and subtracting decimals by having their own bank accounts for the school year. Students will also learn to record all their deposits, withdrawals, interest, and balances.

NCTM 2000 Principles for School Mathematics:

- **Equity:** *Excellence in mathematics education requires equity - high expectations and strong support for all students.*
- **Curriculum:** *A curriculum is more than a collection of activities: it must be coherent, focused on important mathematics, and well articulated across the grades.*
- **Teaching:** *Effective mathematics teaching requires understanding what students know and need to learn and then challenging and supporting them to learn it well.*
- **Learning:** *Students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge.*
- **Assessment:** *Assessment should support the learning of important mathematics and furnish useful information to both teachers and students.*
- **Technology:** *Technology is essential in teaching and learning mathematics; it influences the mathematics that is taught and enhances students' learning.*

Links to NCTM 2000 Standards:

- **Content Standards**

Number and Operations

Instructional programs from prekindergarten through grade 12 should enable all students to--

- understand numbers, ways of representing numbers, relationships among numbers and number systems;
- understand meanings of operations and how they relate to one another;
- compute fluently and make reasonable estimates.

- **Process Standards**

Problem Solving

Students will demonstrate their ability to solve problems by balancing a savings account with deposits and withdrawals.

Reasoning and Proof

Students will demonstrate their ability to reason by justifying through answers.

Communication

Students will demonstrate their ability to communicate their understanding of addition and subtraction of decimals.

Connections

Students will demonstrate their ability to connect addition and subtraction of decimals by learning how to open up a savings account.

Grade/Level:

Grade 6, all ability levels

Duration/Length:

5 days/ 50 minute periods or 3-4 days/86 minute periods

Prerequisite Knowledge:

Students should have working knowledge of the following skills:

- Addition and subtraction of multiple-digit numbers.

Student Outcomes:

Students will:

- Be able to recognize, speak, and use all bank vocabulary.
- Be able to add and subtract decimals.
- Be able to fill out deposit and withdrawal slips.
- Be able to balance a bank register by using their deposits and withdrawals and create Excel spreadsheets.

Materials/Resources/Printed Materials:

- Real-life bank DEPOSIT and WITHDRAWAL slips
- Authentic bank register and spreadsheet
- U.S. currency faces/backs
- Account Number ID cards

- Envelopes of group activity problems
- Stopwatch
- Excel computer program

Development/Procedures:

During the 5 days students will be learning all about banking so they can maintain their own savings accounts with Farmer's Bank for the entire school year and beyond. In addition, the students will learn how to fill out their own deposit and withdrawal slips and maintain their own balances. We hope all students will have fun keeping their own accounts and learning the importance of savings accounts.

Day 1: Money and Banking

Objective: Students will be able to orient themselves with banking terminology that will lead into a unit on addition and subtraction of decimals.

Motivator

Teacher will bring in samples of the real bank materials (register, ID card, deposit/withdrawal slips, etc.).

- Have the students answer the following question. What president or famous American is on each of the following: \$1, \$5, \$10, \$20, \$50, \$100?
- Discuss the results with the students (**Activity 1**). Introduce the mnemonic device, We Love Howard Johnson's Good Food (**Activity 2**).
- Assessment A

Opening Activity:

- Distribute bank vocabulary sheets with words and definitions (**Activity 3**).
- Have the students play the game "Who Has?" with the vocabulary words (**Activity 4**).
- Distribute cards to each student that have definitions of a word on one side and words on the other side.
- Have the students play the game twice as the teacher records the best time with a stopwatch.

Closing Activity/Informal Assessment

- Record each class best time to determine the winning class (**Assessment B**)
- Identify the vocabulary words on a deposit slip and the withdrawal slip. Students will use colored markers to identify the words. Teacher uses his or her own discretion for the amount of words (**Assessment C**).

Day 2 Deposits

Objective: Students will be able to add decimals by depositing money into a savings account.

- Motivator: Students will receive five bank deposits in cooperative groups, such as \$1.89, \$2.63, \$4.04, \$3.59, \$5.25.
- Their objective is to estimate the total of the deposits.
- The above amounts are suggestive.

Opening Activity:

- Ask each group to total the exact amounts of the deposits. This will lead into a discussion that requires the students to convey their method and check to see if their exact answers are close to their estimation.
- Introduce the savings register spreadsheet and instruct the students how to record the above deposits (Activity 5).
- Have the students complete another problem that requires them to add several deposits, record the deposits, and write a description and date for each.
- Ask each group to share their work on the overhead. In conjunction, students will cooperate in Numbered Head groups.
- Distribute points to each group who participates. They can receive a total of 5 points for correct date, amount in correct cell, right description, correct balance and work shown.

Closing Activity:

- **Assessment D: (formal)** Give each student an individual register. Students will have to record at least three deposits and balance the register.

Day 3 Withdrawals

Objective: Students will be able to subtract decimals by withdrawing money from a savings account.

Motivator:

- Each group will estimate their balance after they make two withdrawals from their register that was used the previous day (**Assessment D**).

Opening Activity:

- Have the groups balance their register by using the exact amounts from the warm-up.
- Discuss with the class what method their group used to balance their register. In the discussion, students will learn how to subtract decimals.
- Give each group at least 5 amounts to withdraw from their savings account.
- Remind each group that they will start with a fictitious amount (**Activity 5**).
- Have the groups share their results in Numbered Head groups. Like the previous lesson,

this will require them to fill out a withdrawal slip, in which they will receive a point for the correct date, amount, description, balance and work shown.

Closing Activity:

- Assessment D: **(formal)** Distribute slips of paper to the students that have registers on them. They will have to record at least three withdrawals from a fictitious amount.
- Have the students do “How to Withdraw From Bank” (**Activity 6**).

Day 4 Banking Day

Objective: Students will be able to correctly complete deposit and withdrawal slips.

Motivator:

- Review vocabulary by playing “Who Has??” without using their vocabulary sheets. Time them to see if they have improved since the first day of the unit (**Activity 3 and Assessment B**).

Opening Activity:

- Use the overhead, to model how to fill out a deposit and withdrawal slip along with clues (**Activity 7**).
- Divide the class into cooperative groups and give each group an envelope with bank deposit and withdrawal slips. By using the Clue Group Envelopes (**Activity 8**), each student will have to rely on their team members’ clues to fill out their individual slips correctly.

Closing Activity/Assessment: (formal)

- Have the student write a letter to their parents, informing them of the difference between deposits and withdrawals. They should explain the importance of a savings account and the fact that the student is capable of handling a bank account.

Day 5 Create a Register

Objective: Students will create a balance-record spreadsheet in Excel.

Motivator:

- Students will complete the Rolling in the Dough worksheet. This will reinforce their recognition of legal tender (**Activity 9**).

Opening Activity:

- Have the students share homework letters to their parents.
 - Explain why students will be doing banking in the Computer Lab

Closing Activity:

- Have the students create an Excel spreadsheet to show their deposits, withdrawals, and the balances of their savings accounts (**Activity 10/Sample**).

Performance Assessment:

The assessment of the students will be infused within each daily lesson. For example, students will have to record a deposit and withdraw on a bank register. In addition, the students will have to fill out a deposit and withdrawal slip.

Extension/Follow Up:

- An excellent follow up to the lesson unit is to have the local bank visit your school to demonstrate and open an account for each child. A field trip to the local bank where the students have their accounts is another great reinforcement.
- Daily or weekly deposits to the students' accounts during math classes and coordinated for pickup with the local bank branch manager would also be motivating for the students.
- ART/SS Creating new currency (i.e., \$3 bill) with new face/back and history related explanations for choices would be a great connection to other disciplines.
- Study the history of banking and create timelines.
- Have the students create money alphabets.

Authors:

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ACTIVITY 1

\$1



\$5



\$10



\$20



\$50



\$100



ACTIVITY 2

Money Key Chart

We	\$1	Washington	W
Love	\$5	Lincoln	L
Howard	\$10	Hamilton	H
Johnson's	\$20	Jackson	J
Good	\$50	Grant	G
Food	\$100	Franklin	F



ASSESSMENT A

Directions: Fill in the blanks with money or a President's name.

We	\$1		W
Love	\$5		L
Howard		Hamilton	H
Johnson's		Jackson	J
Good	\$50		G
Food		Franklin	F

Bonus Question: Who is on the \$2.00 bill?

Bank Vocabulary



INTEREST

Payment bank gives you for using your money

WITHDRAW

Taking money out of the bank

BANK TELLER

A bank employee who receives and pays out money

SAVINGS ACCOUNT

The bank's record of your deposits and withdrawals

WASHINGTON

The president on the one dollar bill

DEPOSIT

Putting money in the bank

DOLLAR SIGN (\$) AND DECIMAL POINT (.)

The only two money symbols used in banking

BALANCE

The amount of money you have in the bank

LINCOLN

The 16th president on the five dollar bill

ACCOUNT NUMBER

The eight digit number that identifies your account

CURRENCY

Paper money

HAMILTON

The first Secretary of the Treasury on the ten dollar bill

ACTIVITY 3

ENDORSE	To sign your signature on the back of a check made out to you
REGISTER	The record book where you list your deposits and withdrawals
VAULT	A room in the bank to keep things safe
JACKSON	The 7th president on the twenty dollar bill
SAFE DEPOSIT BOX	A box in the bank vault for the safe storage of valuables
FRANKLIN	The famous inventor and statesman on the one hundred dollar bill
TRANSACTION	Making a deposit or withdrawal with the bank
STATEMENT	A printed record of your bank transactions sent to you every three months
SIGNATURE	What you must sign on every withdrawal slip
GRANT	The Civil War General and 18th President on the fifty dollar bill
COINS	Metal money
SIGNATURE CARD	What you sign in order to open an account
ATM MACHINE	A machine from which you can withdraw cash from your account
SAVINGS	Money accumulated over a period of time
DEPOSIT SLIP	The form you fill out to put money in the bank
WITHDRAWAL SLIP	The form you fill out to take money out of the bank

I HAVE...

WHO HAS????

I HAVE.....

WHO HAS???

I HAVE.....

WHO HAS?????

I HAVE....

WHO HAS?????

I HAVE.....

INTEREST

WHO HAS??????

Taking money out of the bank

I HAVE.....

SAVINGS ACCOUNT

I HAVE.....

WITHDRAW

WHO HAS??????

A bank employee who receives and pays out money

WHO HAS??????

The president on the one dollar bill

I HAVE

BANK TELLER

WHO HAS?????

The bank's record of your deposits and withdrawals

ASSESSMENT B

<p>I HAVE...</p> <p>WASHINGTON</p>	<p>WHO HAS????</p> <p>Putting money in the bank</p>
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<p>I HAVE.....</p> <p>DEPOSIT</p>	<p>WHO HAS???</p> <p>The only two money symbols used in banking</p>
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<p>I HAVE.....</p> <p>DOLLAR SIGN (\$) and DECIMAL POINT (.)</p>	<p>WHO HAS?????</p> <p>The amount of money you have in the bank</p>
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<p>I HAVE....</p> <p>BALANCE</p>
<p>WHO HAS?????</p> <p>The 16th.President on the five dollar bill</p>

Savings Register

Date	Description	Deposit	Withdrawal	Balance

Savings Register

Date	Description	Deposit	Withdrawal	Balance

Savings Register

Date	Description	Deposit	Withdrawal	Balance

Savings Register

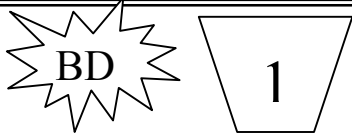
Date	Description	Deposit	Withdrawal	Balance

ACTIVITY 7

HOW TO WITHDRAW FROM THE BANK

account	numbers	signature
date	fraction	pen
words	spelling	
account #	seal	

- 1) You must use a blue, black, or purple _____ when you withdraw from the bank.
- 2) Always leave \$1.00 in your _____ or your account will close.
- 3) The amount of money you want to withdraw must be written in _____ and _____.
- 4) Always put the _____ on your withdrawal form.
- 5) You must write your name only in cursive or your _____ at the bottom right hand corner of your check.
- 6) If you withdraw coins you must put it in _____ form. (Example \$1.32 is one dollar and 32/100.
- 7) All _____ of words must be correct.
- 8) You must write neatly your _____ on the withdrawal form.
- 9) Do not _____ envelope for withdrawals.

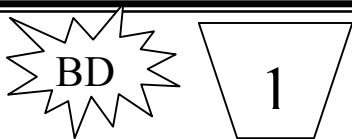


BD 1

Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

Your name is always PRINTED on the deposit slip. Your school name is put in the ADDRESS blank.

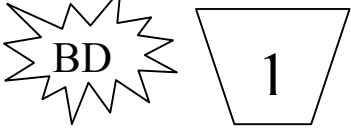


BD 1

Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

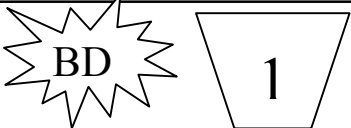
The total amount of your deposit must be written in two places -
TOTAL and NET DEPOSIT



Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

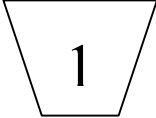

Your 8 digit account number must be put clearly in two places on
the deposit slip.



Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

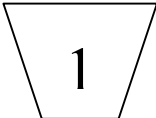

The correct date has to be put on the deposit slip in two places.



Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

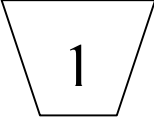

The amount to deposit must be written in numbers with a decimal point(.) in the appropriate column. Currency refers to only bill or paper money.



Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

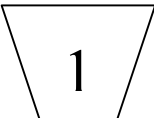

Your NAME is never printed. It must always be your
SIGNATURE on the withdrawal slip.
The correct date has to be put on the withdrawal slip in 2 places.



Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.


The amount to withdraw must be written in NUMBERS ONLY
in two places on withdrawal slip.



Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

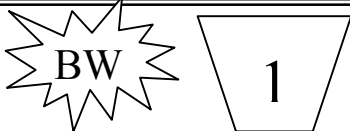
In the amount space, the cents must be written as a fraction or
part of 100 cents (cents/100).



Your group has a banking problem to solve.
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WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

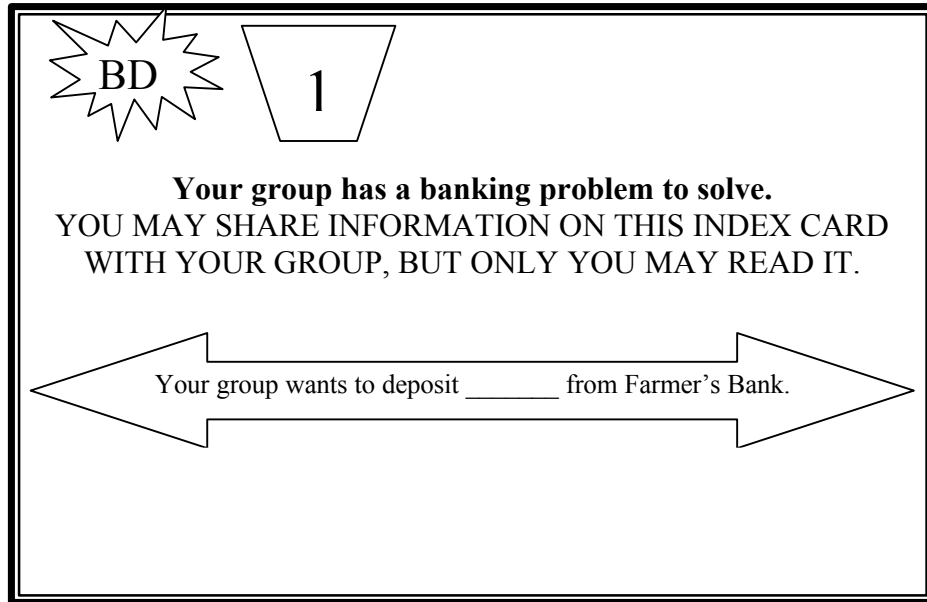
In the space (AMOUNT), the dollar amount must be written in words and spelled correctly.



Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

Your 8 DIGIT ACCOUNT NUMBER must be put clearly in two places on the withdrawal slip.



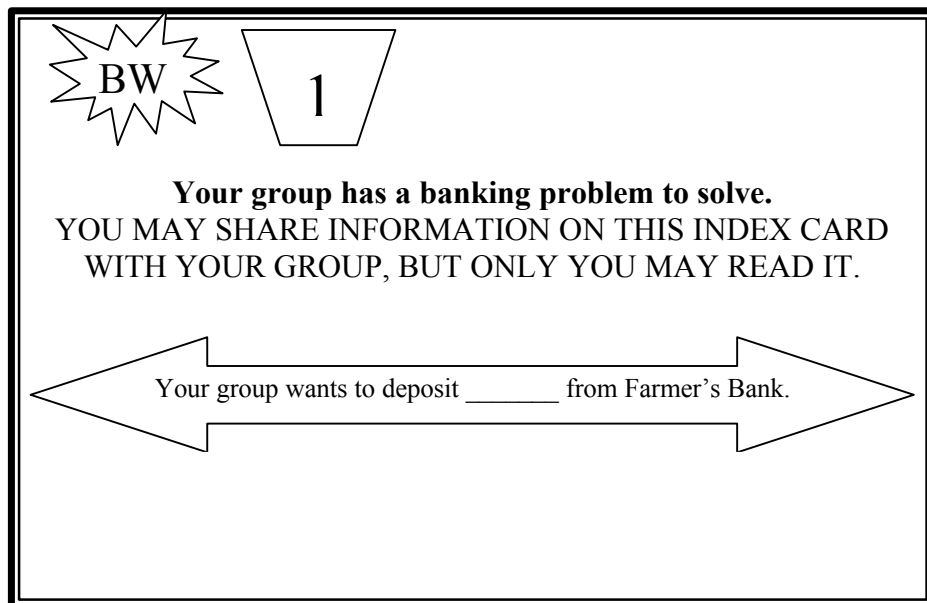
BD

1

Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

This envelope contains a starburst with the letters 'BD' and a trapezoid with the number '1'. Below these is a bold instruction: 'Your group has a banking problem to solve. YOU MAY SHARE INFORMATION ON THIS INDEX CARD WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.' At the bottom, a large double-headed arrow contains the text: 'Your group wants to deposit _____ from Farmer's Bank.'



BW

1

Your group has a banking problem to solve.
YOU MAY SHARE INFORMATION ON THIS INDEX CARD
WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.

Your group wants to deposit _____ from Farmer's Bank.

This envelope contains a starburst with the letters 'BW' and a trapezoid with the number '1'. Below these is a bold instruction: 'Your group has a banking problem to solve. YOU MAY SHARE INFORMATION ON THIS INDEX CARD WITH YOUR GROUP, BUT ONLY YOU MAY READ IT.' At the bottom, a large double-headed arrow contains the text: 'Your group wants to deposit _____ from Farmer's Bank.'

ACTIVITY 10

Directions for Creating the Excel Bank Spreadsheet

- Step 1 Explain the idea of cells and their coordinates
- Step 2 Insert the following headings in the indicated cell
- | | |
|----------|-------------|
| Cell A1: | DATE |
| Cell B1: | DESCRIPTION |
| Cell C1: | DEPOSIT |
| Cell D1: | WITHDRAWAL |
| Cell E1: | BALANCE |
- Step 3 To format DATE column, highlight rows in column A, right click mouse to FORMAT CELLS, left click on FORMAT CELLS and choose appropriate date format.
- Step 4 To format DEPOSIT, WITHDRAWAL and BALANCE columns, highlight rows in columns C, D & E, right click mouse to FORMAT CELLS, left click on FORMAT CELLS and choose CURRENCY.
- Step 5 Move cursor to cell E3. Type formula **=E2+C3-D3**
- Step 6 Right click on copy. Highlight to bottom row & right click on paste.

Spreadsheet Practice - Savings
Register

note formula in cell E6

This
formula
was
copied
down the
column
by
selecting
cell E6,
copy,
then
highlight
the row
and
paste.

Date	Description	Deposit	Withdrawal	Balance
5/12/02	Balance Forward			685.24
5/12/02	Withdrawal – gift for Mom		30.00	655.24
5/31/02	Interest earned	1.14		656.38
6/15/02	Withdrawal – trip to Six Flags		50.00	606.38
6/26/02	Deposit – gift from grandma	60.00		666.38
6/30/02	Interest earned	1.11		667.49
7/5/02	Withdrawal – cash for movie, etc.		20.00	647.49

Holistic Rubric for Banking Unit

- 3 All parts of the question are answered accurately and completely. All directions are followed.
- 2 Answers deal correctly with most aspects of the question, but something is missing. May deal with all aspects but have minor errors.
- 1 Addresses item but only partially correct; something correct related to the question.
- 0 Does not address task, unresponsive, unrelated or inappropriate. Nothing correct.

Farmer's Bank

Branch Office Locations

Annapolis

Schools: Phoenix Center, Learning Center
Church Circle Office
5 Church Circle
410-263-2603

School: Annapolis Middle
Hillsmere Drive Office
801 Compass Way
410-224-4006

Arnold

Schools: Severn River Middle,
Magathy Middle
Arnold Office
2 Arnold Rd @ Ritchie Highway
410-757-5550

Edgewater

School: Central Middle
Central Middle Office
52 West Central Avenue
410-956-3144

Lothian

School: Southern Middle
Wayson's Corner Office
Route 4 and 408
410-741-1966

Pasadena

Schools: Chesapeake Bay Middle, George Fox Middle, & Marley Middle
Mountain Road Office
3030 Mountain Road
410-255-9200

Glen Burnie

Schools: Old Mill Middle North & Old Mill Middle South
Hospital Drive Office
200 Hospital Drive

Severna Park

Schools: Severna Park Middle
Benfield and Jumpers Hole Road Office
Benfield and Jumpers Hole Road
410-647-7988

To locate a bank branch closest to you, the following middle schools in Anne Arundel County need to contact:

Mary E. Brodowski
Assistant Vice President
Branch Manager
410-255-9200

Mcarthur Middle
Meade Middle
Brooklyn Park Middle
Lindale Middle
Arundel Middle
Crofton Middle