Economics-in-Marketing CTE Lesson Plan

Lesson Title
Federal Reserve and Monetary Policy

Lesson Objective
At the completion of this lesson, students will understand what the FED is and how they can change the money supply.

Concepts
CTE Concept(s) Government and business
Economic Concept(s)- Federal Reserve, monetary policy, unemployment, reserve requirement

Standards/Benchmarks
Michigan Career and Technical Education Segment 12 I.D.4 Acquire knowledge of the impact of government on business activities to make informed economic decisions.
Michigan Department of Education High School Content Expectations **Social Studies: Economics:** 2.2.4 Federal Reserve and Monetary Policy. Explain the roles and responsibilities of the Federal Reserve System and compare and contrast the consequences - intended and unintended - of different monetary policy actions of the Federal Reserve Board as a means to achieve macroeconomic goals of stable prices, low unemployment, and economic growth.

Supplies Needed	
Lesson Supplies	Paper, pencil, roll of nickels, shoe box or other container to store deposits, paperclips
Student Handout 1	Deposit Tickets
Student Handout 2	Master Deposit
Student Handout 3	Loan Application
Student Handout 4	Federal Reserve and Monetary Policy Quiz
Video1	Federal Reserve Explained

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1. Introduce the CTE lesson.

[Grading is left to the discretion of the teacher.]

A. Show Video 1: Federal Reserve Explained (8:50 minutes).

B. The teacher will hold a class discussion and explanation of the Federal Reserve System (FED) and how the FED regulates the money supply. Explain to students that reserve requirements, discount rate, and open market operations are the ways the FED can change the amount of money in circulation.

1. Conduct a class discussion using the following teaching notes.

    a. Reserve Requirements - The FED can increase the reserve requirement and thereby reduce the money supply as banks are forced to hold more reserves and lend less. Likewise, the FED can decrease the reserve requirement and increase the money supply as banks are able to loan more. However, changes in the reserve requirement are made very infrequently and represent an extreme measure of affecting the money supply. Early in the FED's history, reserve requirements were fixed by law. The Thomas Amendment to the Agricultural Adjustment Act of 1933 first gave the FED power to change reserve requirements. That power was made permanent by the Banking Act of 1935.

    b. **Discount Rate** - the rate at which banks can borrow from the FED can be increased in order to reduce the money supply and decreased in order to increase the money supply. Banks usually don't borrow much from the FED. Therefore, a change in the discount rate has a relatively small effect on the money supply. Early in the FED's history, changes in the discount rate were the primary monetary policy tool available to the FED.

    c. Open Market Operations - OMO, the FED's purchases and sales of US treasury securities are the primary tool of monetary policy. Open market operations are carried out almost every business day at the Trading Desk at the Federal Reserve Bank of New York. The NY Reserve Bank carries out these operations on behalf of the entire FED system. The Trading Desk is actually a staff of people who work at the FED of New York and who buy and sell government securities in order to change the money supply and get the federal funds rate, the interest rate charged to each other, for short terms, usually overnight loans, as close as possible to the target for that interest rate set by the Federal Open Market Committee.

    d. **Monetary policy** - Changes in the supply of money and the availability of credit initiated by a nation's central bank to promote price stability, full employment and reasonable rates of economic growth.

2. Explain as the FED allows more money to be in circulation, more individuals and business owners have more money to spend, which stimulates the economy. Every time a business expands, they can hire more people which helps keep unemployment rates low.

2. Assess students' economic awareness as it relates to the CTE lesson.

A. Explain that they are going to learn more about the purposes and functions of the Federal Reserve System. Share that the Federal Reserve is our nation's central bank.

B. Conduct a class discussion about the Federal Reserve System.

Discussion #1: Why do people use banks?
Possible Answers: Banks provide financial services to individuals, businesses, and state and local governments. These services include checking accounts, savings accounts, certificates of deposit, loans, safe deposit boxes, ATMs, etc.

Discussion #2: Why do people keep their money in banks?
Possible Answers: It's more secure in a bank than it is sitting in a box at home. If you keep money in a checking account at a bank, you can write checks and initiate electronic payments against the balances in the account. Banks also pay interest on many of the accounts they offer.)

Discussion #3: How do banks make money?
Possible Answers: Banks make money by taking in deposits and making loans. They charge a higher interest rate on their loans than they pay on the deposits they take in. Banks also make money by charging fees for the services they provide to their customers.

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3. Work through the economic lesson as it is *embedded* in the CTE lesson.

A. Conduct an activity that simulates banking.

1. Inform students that they are going to open a classroom bank. This bank will be unique because it will accept only deposits and make loans in dollar bills. Inform students that you, the bank manager, will be paying 5 percent interest on all deposits. Have the students take out any dollar bills they have in their pocket. Choose or have the class elect a recorder for the bank. Remind students that the classroom bank will accept only deposits of dollar bills—no other denomination of notes and no coins will be accepted.

2. Students will get all of their dollars back before the end of the class and you will pay a nickel for each dollar deposited in the bank during the class period. Inform the students that when a bank offers 5 percent interest, it is usually referring to an annual rate of interest of 5 percent, but that you will assume this class period represents a full year. Anyone who deposits a dollar in the bank at the beginning of the class will withdraw the dollar at the end of the class period and get one nickel (5 percent) in interest paid by you, the bank manager.

3. Distribute one deposit slip from Student Handout 1: Deposit Slips to the first 12 students who wish to deposit dollar bills in the new bank. If fewer than 12 students want to deposit a dollar bill that is okay, but encourage at least a total of $10 in deposits. Limit the total number of

dollar bills each student is allowed to deposit to no more than three dollar bills. Ask those students with deposit slips to complete them and line up in front of you in preparation to make their deposits.

4. Distribute Student Handout 2: Master Deposit to each student.

5. Instruct the recorder to record the names of the depositors and the amount they deposit in the bank on Student Handout 2: Master Deposit as each person gives you a deposit. Ask the students to follow along, recording the deposits on Student Handout 2: Master Deposit.

6. Take the deposit from the first student and paperclip the money to the deposit slip. Place the money and deposit slip in the shoe box or container you are using to store deposits. Announce the name of the student and the amount he or she is depositing. Students will be recording the information on Student Handout 2: Master Deposit as the recorder enters the name of the depositor and the amount he or she deposited on the deposit slip.

7. Once the deposit transaction is completed, ask the student to return to his or her seat. Continue accepting deposits until all students who wish to deposit dollar bills have made their transactions or 12 students have deposited their money, whichever comes first. Put the box containing the dollar bills away in a safe place.

8. Have the students and the recorder total the deposits on Student Handout 2: Master Deposit. Then compare the totals to ensure accuracy.

9. Ask the students if any of them would like to borrow money from the bank.

10. Distribute one loan application from Student Handout 3: Loan Application to the first 12 students who wish to borrow money from the bank. Explain that each borrower may apply for one, two, or three dollars. Offer the loans at 0 percent interest. While fewer than 12 students may wish to borrow from the bank, encourage at least $10 total to be borrowed from the bank. After the students who wish to borrow money have completed their loan applications, ask them to line up in front of you.

11. Explain that banks review the creditworthiness of borrowers before making loans, but that in this classroom example, you are going to assume that a credit check has been conducted and all of the students who apply will be getting loans.

12. Explain that instead of giving cash to each approved borrower, you will open a bank account for each borrower and deposit the loaned money in his or her account.

13. Take the loan application from the first student. Approve the loan application of the first student. Announce the name of the student and the amount he or she is borrowing. Instruct the recorder to enter the name of the borrower and the amount he or she borrowed on Student Handout 1: Deposit Slip. The recorder will complete and issue a deposit slip in the amount of the loan to the borrower. Record the amounts borrowed on a white board to be totaled at the end. Once the loan transaction is completed, ask the student to return to his or her seat. Continue accepting loan applications, making loans, and issuing deposit slips until all students who wish to borrow dollar bills have made their transactions or 12 students have

deposited their money or the value of the total loans equals the value of total deposits, whichever comes first.

B. Conduct a class discussion to reflect upon the simulation.

Discussion #4: Has the bank loaned out all of the money it accepted in deposits?

Discussion #5: Could all of the people who have deposit receipts withdraw the money in cash in their accounts?
Answer: No

Discussion #6: What would happen if all of the people that have deposit receipts came to the bank on the same day to withdraw money in cash?
Possible Answers: Not everyone would be able to get money out. The bank would have to make decisions about which depositors got their money out, or the bank would have to stop honoring withdrawal requests.

C. Conduct a lecture and discussion to explain the following concepts.

1. The United States, and most of the world, has a fractional reserve banking system.

2. Bank reserves are the amount of deposits not loaned out by banks. A bank's reserves can be calculated by subtracting a bank's total loans from its total deposits.

Discussion #7: Ask the students to calculate Classroom Bank's current reserves.

Write this number on the board. If the total reserves are 0, ask the students why this would cause a problem. (If Classroom Bank's reserves are 0, then if any of the depositors come in to make a withdrawal, there would be no cash on hand to honor the withdrawal request.)

a. In a fractional reserve banking system, banks take in deposits and lend most of the money they take in. People who borrow money from banks use that money to buy houses or cars, start businesses, make home improvements, go to college, etc.

b. Unlike in the Classroom Bank, the money loaned out by real banks does not sit in bank accounts—it gets spent almost immediately by the borrowers. Only a small fraction of the amount deposited in banks is kept on reserve, either in electronic accounts at the Federal Reserve or in vault cash. The result is that not everyone can get their money out of the bank in cash on the same day.

c. The Federal Reserve requires most banks to hold a portion, up to 10 percent, of their deposits in reserve. These are called required reserves.

Discussion #8: Ask the students whether the Classroom Bank is currently meeting a 10 percent reserve requirement.

d. Throughout history, there have been episodes where too many people tried to take their money out of their banks at the same time. During such episodes, banks usually ran out of cash and therefore couldn't honor withdrawal requests, and many banks went bankrupt. When a bank goes bankrupt, it's called a bank failure. When many depositors run into a bank at the same time to get their money out, we call that a "bank run". When a bank run that begins at one bank spreads to other banks and causes people to generally distrust banks, we call that a bank panic.

Discussion #9: Suppose you learned that the bank owner and manager was planning to leave the country and move permanently to Tahiti. What would you do?
Possible Answers: Most students will say that they would want to withdraw their money immediately from the Classroom Bank, since they have no guarantee that you aren't going to take their money with you when you move to Tahiti.

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4. Work through *related, contextual* economic-in-CTE examples.

A. In order to demonstrate monetary policy, use the school store laboratory or simulated store setting to influence purchases.

1. Present a new scenario involving the school store laboratory that has the intention of influencing student purchases. Scenario examples include: extend credit to students with no interest, extend credit to students at a 50% interest rate (don't actually charge the students this rate…….you wouldn't want to be price gauging your students), provide students with a stimulus payment (.25 cents/student).

2. Each day put hypothetical purchases on the board. Have the students keep notes and data about the student's hypothetical purchases over the course of the week.

3. At the end of the week, conduct a class discussion about the various scenarios presented throughout the course of the week.

5. Work through *traditional economic* examples.

A. Conduct a class discussion in which a story problem is presented and students are asked to respond within groups.

1. Present groups with the following story problems:

   a. Story problem #1: The amount of money in circulation is low and the FED wants to stimulate the economy. What should they do?
   Possible Answers: The FED should lower the reserve requirement so banks have more to loan out to their customers.

   b. Story problem #2: There is not enough credit available for people to buy homes, what should the FED do?

Possible Answers: The same as answer #1 and/or banks can lower the interest rates so people have more incentive to borrow more. Also, a student might talk about open market operations where the FED can buy or sell government securities to raise or lower the money supply.

6. Students demonstrate their understanding.

A. Have students work in pairs to conduct a discussion about the FED and its importance.

1. In partners, the students will dialogue about the FED and its importance.

7. Formal assessment.

A. Students will be assessed via a short answer quiz.

1. Distribute Student Handout 4: Federal Reserve and Monetary Policy Quiz.

Standards

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MBA Research Performance Indicators- Explain the concept of fiscal policies (EC:074) (MN)

References

Econedlink: *Council for Economic Education*. (n.d.). *Economic Glossary*. Retrieved from http://www.econedlink.org/economic-resources/glossary.php

Altnewschannel. (2010, December 10). *The Federal Reserve Explained.* Retrieved from http://www.youtube.com/watch?v=Oe0fGXzKb1o