

MIDDLE SCHOOL CORNER (6-8): I WANT A CREDIT CARD--OR DO I?

I want a credit card--or do I?

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Introduction: Credit cards seem like a great way to pay for things. It only takes a small payment each month to buy whatever your heart desires. You can charge \$1000.00 for the paltry sum of \$25.00 per month. But, will you still be paying when the thrill is gone?

Prior Knowledge: Students must be able to work with percents and make pie charts. If students can work with formulas and exponents, they can do the extensions.

Grade Level: 6-8

Curriculum Topic Benchmarks: number sense, reasoning

Task: Students will pretend to borrow \$1000.00 on a credit card. They will pretend to make the minimum payments for a year. When they're done, they will make a pie chart showing how much of their payments reduced their debt, and how much was interest.

Resources:

- The Credit Card Advisor
<http://www.banx.com/creditcard.asp>
- GromCo Credit Card Advisor
<http://www.gromco.com/cca/list.html>
- ABC Guides--Credit Cards
<http://www.abcguides.com/creditcards/ccina.htm>

The above resource gives rates and fees for a variety of credit cards.

Process: Students need to come up with an annual interest rate and list of fees for their credit card. Assume a charge of \$1000.00 and minimum repayment terms of 2.5% per month. Students need to convert the APR into a monthly rate. The student will work through 12 months of payments adding the interest and other charges and deducting the payment. Then they will find the total of their payments and how much of that amount was interest and how much was principal. Next the students should make a pie chart

showing what percent of their payments went to principal and what portion went to interest and other charges. Discuss the pros and cons of credit.

Learning Advice: Introduce students to the language--principal, APR, etc. before the lesson. Advanced students could use amortization and interest formulas.

Evaluation: Students will be evaluated based on the accuracy of their computations and graph.

Extensions: Have the students try paying off their debt at the rate of 5% and 10% per month. Have the students figure out how long it would take to pay off their debt if they only make minimum payments, pay 5%/month or pay 10% per month. Does it take 4 times as long to pay off your debt at 2.5% as it does at 10%?

Conclusion: Depending on the level of the student, they will have had practice working with percents and decimals. They may have had practice working with exponential growth formulas. They will have had practice making pie charts. Hopefully, they will have gained some insight into credit management.



Names :

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Credit cards seem like a great way to pay for things. It only takes a small payment each month to buy whatever your heart desires. You can charge \$1,000.00 for the paltry sum of \$25.00 per month. But, will you still be paying when the thrill is gone?

The goal of this activity is to help make you aware of the cost of credit.

1. Examine the different The Credit Card Advisor <http://www.banx.com/creditcard.asp> ABC Guides--Credit Cards <http://www.abcguides.com/creditcards/ccina.htm> and choose one.
2. Pretend to borrow \$1,000.00 and assume a monthly payment of 2.5% of your balance.
3. Make a table with that contains the following information:
 - opening balance
 - interest charge for the month (remember to divide the APR by 12)
 - payment for the month
 - ending balance

Do this for 12 months.

4. How much of your debt did you pay?
5. How much did you pay in total?
6. How much was interest and how much was principal?
7. Find the proportion of interest and principal to the total payments.
8. Make a pie chart with this information.

Now try this again, but this time use 5% of the original amount each month.

Now try it using 10% of the original amount each month.

Here are some other things you can try:

- Find the total time it would take to pay off the credit cards at the given rates of payment. Don't forget annual fees. You may find this bank card calculators useful. Credit Card Calculator http://www.webwinder.com/wwhtmbin/java_cci.html
- Find out the total amount of interest you paid to borrow that \$1,000.00.
- Does it take 4 times as long to pay off a card at 2.5% each month as it does at 10% each month?
- Talk to other students about what you discovered.
- Write up a brief report on your findings.
- Use a spreadsheet to do your computations and graphs.

If you aren't familiar with the language used to talk about credit, you may find this on-line glossary useful.

Depending on the type of math class you are currently enrolled in, your teacher will have special formulas or procedures for you to use to find this information