

Credit Card Interest

(from Public Profile Unit 5)

Part 1: Teacher-led discussion

Work through one example with students which shows how interest is calculated from the date of purchase. For example:

balance carried forward:			\$1250
purchase	June 10	Crazy Harry's	\$45.30
purchase	June 16	Super Gas	\$25.00

The bill is due on July 3 and the person pays \$30. Show how interest will be calculated for the entire month for the balance carried forward and from the date of the purchase for the other items and explain that the \$30 payment is applied to the previous balance. Refer to the back of the credit card statement from Activity 2 to point out these terms. Use the daily interest rate provided on the bill.

Work through a payment scenario with the class for this month, based on the information above and using the information from the back of last days bill. Then show students how long it will take to pay off the bill if the minimum payment is made each month without making any other purchases. A spreadsheet will help students see the slow progression in paying off the bill.

Part 2: Group activity

Divide students into groups of four or five and provide each group with a different payment scenario. For example: Group A pays \$100/month, group B pays \$175, etc. The groups predict the outstanding balance after a year. (Use Sample Worksheet 1, a chart for each month) Students may choose to do this on a spreadsheet if available.

Have students start from the balance you have calculated for August so that they don't have to get caught up in the complications of calculating interest from the purchase date.

Provide chart paper so that students can present data to the class.

Lead a class discussion, which relates the information provided by the groups, and draws conclusions regarding the advantages and disadvantages of credit.

Part 3: Individual

When students work through this portion of the activity allow them to calculate the interest for the entire month instead of to the exact purchase date. This will allow students to understand the effects of purchasing on credit without getting caught up in the calculations.

Allow each student to randomly draw their interest rate card (between 6.5% and 24%), credit limit cards (between \$4000 - 10 000) and monthly take-home salary cards (between \$1800 and \$4000).

Distribute blank credit card bill Sample Worksheet 1.

Provide current local flyers and advertisements so that students may "shop" and select items for purchase.

Instruct students to make a minimum of two purchases per month for two months (minimum of \$800/month total).

Instruct students to create complete credit card bills, which reflect these transactions. Dates and particulars of purchase should be included. Payments should also be recorded and are up to the discretion of the student. However, students should be reminded that they should plan on being able to pay no more than ten percent of their monthly salary on credit card balances. They must always make at least the minimum payment.

Suggest that students make no further purchases after four months, but devise a schedule to allow for the bill to be completely paid within the next 8 - 12 months (again with the limitation that no more than 10% of their salary be used). Sample Worksheet 1 or modification of Sample Worksheet 1 may again be used to display this information.

Some students may not be able to pay off their bill. This should be discussed. For example, ask “Will credit card companies give you credit limits higher than you can realistically deal with?”

Have students include a chart in their Borrower’s Guide, which highlights the advantages and disadvantages of credit (to be included in the credit section).

Assessment/Evaluation Techniques

Assess students’ teamwork as they work in their groups. Assess work habits while working on the final “shopping” activity. Assess students’ Problem Solving by evaluating the final “shopping” activity and assess Application by examining students’ advantages/disadvantages chart in their Borrower’s Guide.

Accommodations

If spreadsheet technology is available, teachers may wish to work through the calculations featured in Worksheet 1 on spreadsheet software. The teacher may wish to develop the “advantages/disadvantages to credit” chart as a class.

Resources

Actual credit card bills (both front and back, with private information removed) are recommended to increase the validity of this activity.

Aten, Jerry. *Math for the Real World*. Grand Rapids: Corel, 1997. (pp. 21-24)

Golomb, Kristen. *Economics and You*. USA: Mark Twain Media, 1996. (pp. 43-45) - (for simplified credit card application and statement)

www.creditnet.com/cc.software.html – (this site has free software called Credit Card Math that demonstrates the problem with making minimum payments only, although it is a DOS program it does show the pitfalls of credit cards in a clear step-by-step manner – teachers may wish to use it as a class demonstration).

www.studentmarket.com/studentmarket/shopping-for-credit-cards.html – (provides student focused information on what to consider when choosing a credit card).

Sample Worksheet 1

This chart enables students to organize information when making credit card purchases. A page, which features several of these charts, allows students to make repeated calculations over several months.

This activity is meant to provide students with an estimate of their credit charges, it will not be exact as they are not calculating interest from the date of purchase.

Previous balance		
Interest for month Daily rate <input type="checkbox"/> balance <input type="checkbox"/> number of days in month		+
Purchases (+)	Date	Amount
		+
		+
		+
Total credits		-

(payments) (-)		
New balance (this balance goes on next month's sheet)		

Sample Completed Chart

Previous balance	\$1250	
Interest for month Daily rate <input type="checkbox"/> balance <input type="checkbox"/> number of days in month		+\$19.10
Purchases (+)	Date	Amount
Jacket	Sept. 12	+ \$86.50
CD	Sept. 21	+ \$16.45
		+
Total credits (payments) (-)		- \$120
New balance (this balance goes on next month's sheet)	\$1252.05	

Sample Worksheet 2 - Spreadsheet

This spreadsheet is set up to be used only from the point that no further purchases are being made.

	A	B	C	D	E
1	Starting Balance				
2	Annual Rate				
3	Daily Rate				
4					
5					
6	Month	No. of Days	Payment	Interest	Remaining Balance
7				=B1*B3*B7	=B1+D7-C7
8				=E7*\$B\$3*B8	=E7+D8-C8
9					