

Managing credit card payments

Students use a simple formula to calculate the true cost of items bought with a credit card.

Learning goals

Big idea

When you don't pay off the full amount that you owe on a credit card, you'll have to pay interest on the money you still owe.

Essential questions

- How do interest rates affect credit card payments?
- How do you calculate the cost of a purchase including interest?

Objectives

- Learn about making informed choices about credit offers
- Calculate payments for credit card purchases based on the principal and interest rate

NOTE

Please remember to consider your students' accommodations and special needs to ensure that all students are able to participate in a meaningful way.

KEY INFORMATION

Building block:

 Financial knowledge and decision-making skills

Grade level: Middle school (6-8)

Age range: 11-14

Topic: Borrow (Managing credit)

School subject: CTE (Career and technical education), Math, Social studies or history

Teaching strategy: Direct instruction, Simulation

Bloom's Taxonomy level: Understand, Apply

Activity duration: 45-60 minutes

National Standards for Personal Financial Education, 2021

Managing credit: Standards 4-1, 8-2, 8-3, 8-4, 8-7, 12-1, 12-12

These standards are cumulative, and topics are not repeated in each grade level. This activity may include information students need to understand before exploring this topic in more detail.

What students will do

- Calculate and analyze how monthly payments on a credit card change based on the principal and interest rate.
- Reflect on ways to reduce the amount owed on a credit card.

Preparing for this activity

- Print copies of all student materials for each student, or prepare for students to access them electronically.
- Ensure students have access to calculators.
- Print enough copies of the sample credit cards and the "for sale" slips in this guide for each student to have one card and one slip.
 - Cut apart the individual cards and slips.
- Become familiar with the video on making minimum payments.
- Obtain a computer with Internet access and a projector or smartboard to show the video.

What you'll need

THIS TEACHER GUIDE

- Managing credit card payments (guide)
cfpb_building_block_activities_managing-credit-card-payments_guide.pdf
- Computer with Internet access and a projector or smartboard
- Video on making minimum payments at <https://www.ftc.gov/media/70851>

STUDENT MATERIALS

- Managing credit card payments (worksheet)
cfpb_building_block_activities_managing-credit-card-payments_worksheet.pdf
- Sample credit cards and "for sale" slips (in this guide)
- Calculators

Exploring key financial concepts

Most people in the United States have a credit card. In fact, many people may have several credit cards. It's important to know the real cost of buying things with credit. When you buy something with a credit card, you're borrowing money from the credit card company and the company will send you a bill. The bill will include the balance, which is the full amount you owe. It also includes an option for a minimum payment, which is the lowest amount of money the company will take for the payment. But if you make only the minimum payment, it can take much longer to pay off the credit card balance.

To illustrate how to calculate the interest and determine monthly payments, we can use an oversimplified formula where you multiply the principal x interest rate x term (how long it will take to pay back). This simple interest formula is often written as $I = P \times R \times T$:

- I = the amount of simple interest
- P = the principal, which is the original amount borrowed
- R = the interest rate of the credit card
- T = the amount of time it takes to pay back the amount borrowed

The lower those numbers are, the less interest you need to pay:

- Lower principal = less money you borrow and therefore less money you will repay
- Lower interest rate = less interest you will be charged to borrow money
- Shorter term = fewer total payments you will have to make, but each payment is higher

Teaching this activity

Whole-class introduction

- Ask the students if they know the difference between making a minimum payment on a credit card and paying off the credit card balance in full.
- Explain that they'll learn about the true cost of using a credit card when you don't pay it off in full every month.
- Show the class this video on making minimum payments on a credit card:
<https://www.ftc.gov/media/70851>.

TIP

Because products, terms, and laws related to credit cards change, students should be encouraged to always look for the most up-to-date information.

- Distribute the “Managing credit card payments” worksheet to students.
- Give each student one sample credit card and one “for sale” slip.
- Review with students how to use an oversimplified interest formula of principal \times rate \times term to calculate monthly payments. This oversimplified interest formula is often written as $I = P \times R \times T$:
 - I = the amount of simple interest
 - P = the principal, or total amount borrowed
 - R = the interest rate of the credit card
 - T = the period of time (calculated as 30-day months) from the date the money was used to the date it was repaid
- Be sure students understand key vocabulary:
 - **APR (Annual Percentage Rate):** The cost of borrowing money on a yearly basis, expressed as a percentage rate.
 - **Interest rate:** A percentage of a sum borrowed that is charged by a lender or merchant for letting you use its money.
 - **Principal:** In the lending context, principal is the amount of money that you originally received from the lender and agreed to pay back on the loan with interest.
 - **Term:** A fixed or limited period of time for which something lasts or is intended to last (for example, a five-year loan, a three-year certificate of deposit, a one-year insurance policy, a 30-year mortgage).

NOTE

Be sure to explain to students that this is an oversimplified approach to determining interest. The actual math will likely be more complicated.

TIP

Visit CFPB’s financial education glossary at consumerfinance.gov/financial-education-glossary/.

Individual work

- Students will work independently to complete the worksheet, using the “for sale” item and sample credit card.
 - They should use a calculator to help them with the calculations.
- Students will then answer the reflection questions.

Wrap-up

- Once students have finished, bring students back together to share their results.
 - Ask students to share what the original price of their item was and how much they actually ended up paying for it with interest.
- Ask students to share their answers to the reflection questions.

Suggested next steps

Consider searching for other CFPB activities that address the topic of borrowing, including managing credit. Suggested activities include “[Avoiding debt](#)” and “[Paying for a science expedition using credit](#).”

Measuring student learning

Students’ answers on their worksheets and during discussion can give you a sense of their understanding.

This answer guide provides possible answers for the “Managing credit card payments” worksheet. Students’ calculations will differ based on their item and the interest rate on their sample credit card.

Keep in mind that students’ answers to reflection questions may vary, as there may not be only one right answer. The important thing is for students to have reasonable justification for their answers.

Answer guide

Item	Price	Term (months)	Total paid credit card 1	Total paid credit card 2	Total paid credit card 3	Total paid credit card 4	Total paid credit card 5	Total paid credit card 6
Basketball shoes	\$75	2	\$76.76	\$76.97	\$77.71	\$78.20	\$76.37	\$77.31
Interest charged			\$1.76	\$1.97	\$2.71	\$3.20	\$1.37	\$2.31
Monthly payment			\$38.38	\$38.49	\$38.85	\$39.10	\$38.18	\$38.66
Scientific calculator	\$100	4	\$104.68	\$105.26	\$107.23	\$108.54	\$103.65	\$106.16
Interest charged			\$4.68	\$5.26	\$7.23	\$8.54	\$3.65	\$6.16
Monthly payment			\$26.17	\$26.31	\$26.81	\$27.14	\$25.91	\$26.54
Video game system	\$225	18	\$272.40	\$278.23	\$298.17	\$311.51	\$261.92	\$287.41
Interest charged			\$47.40	\$53.23	\$73.17	\$86.51	\$36.92	\$62.41
Monthly payment			\$15.13	\$15.46	\$16.56	\$17.31	\$14.55	\$15.97
Hoverboard	\$250	8	\$273.41	\$276.28	\$286.13	\$292.72	\$268.23	\$280.82
Interest charged			\$23.41	\$26.28	\$36.13	\$42.72	\$18.23	\$30.82
Monthly payment			\$34.18	\$34.54	\$35.77	\$36.59	\$33.53	\$35.10
Cell phone	\$400	20	\$493.63	\$505.14	\$544.53	\$570.89	\$472.92	\$523.29
Interest charged			\$93.63	\$105.14	\$144.53	\$170.89	\$72.92	\$123.29
Monthly payment			\$24.68	\$25.26	\$27.23	\$28.54	\$23.65	\$26.16
Laptop computer	\$450	10	\$502.67	\$509.14	\$531.30	\$546.13	\$491.02	\$519.35
Interest charged			\$52.67	\$59.14	\$81.30	\$96.13	\$41.02	\$69.35
Monthly payment			\$50.27	\$50.91	\$53.13	\$54.61	\$49.10	\$51.93
Bicycle	\$500	12	\$570.22	\$578.85	\$608.39	\$628.17	\$554.69	\$592.47
Interest charged			\$70.22	\$78.85	\$108.39	\$128.17	\$54.69	\$92.47
Monthly payment			\$47.52	\$48.24	\$50.70	\$52.35	\$46.22	\$49.37
	APR 14.24%		APR 15.99%	APR 21.98%	APR 25.99%	APR 11.09%	APR 18.75%	

Sample credit cards

Print enough copies of this page to give each student one sample credit card. Cut the cards apart.



Credit card 1

APR 14.24%

Credit card 2

APR 15.99%

Credit card 3

APR 21.98%

Credit card 4

APR 25.99%

Credit card 5

APR 11.09%

Credit card 6

APR 18.75%

"For sale" slips

Print enough copies of this page to give each student one item for sale. Cut apart the items.



For sale: Scientific calculator

Cost: \$100

Term: Paying the minimum payment, it takes you 4 months to pay it off



For sale: Bicycle

Cost: \$500

Term: Paying the minimum payment, it takes you 12 months to pay it off



For sale: Laptop computer

Cost: \$450

Term: Paying the minimum payment, it takes you 10 months to pay it off



For sale: Hoverboard

Cost: \$250

Term: Paying the minimum payment, it takes you 8 months to pay it off



For sale: Cell phone

Cost: \$400

Term: Paying the minimum payment, it takes you 20 months to pay it off



For sale: Video game system

Cost: \$225

Term: Paying the minimum payment, it takes you 18 months to pay it off



For sale: Basketball shoes

Cost: \$75

Term: It takes you 2 months to pay them off