

Instructional Recipe

What is the Business of Interest?

Grade 9-12

Subject: Mathematical Models Applications
Cross Curricular Connection: Banking & Financial Systems
Education Service Center Region 20



Online research and information resources available through a partnership between the Texas State Library and Archives Commission, the Texas Education Agency and Education Service Center, Region 20
<http://web.esc20.net/k12databases>

Step 1 – Ask

Objectives: Students will develop an understanding of interest, learn how to calculate interest on loans, and comprehend that interest is added onto the principal of the loan and can necessitate additional income for repayment.

Introduction: The key to best business practice and the concept of keeping a business in the *black financially* requires an understanding of the business of interest. In this lesson, students will play an online game to develop a theoretical company and learn how interest works and what best business practices are all about.



Photo from: http://www.flickr.com/photos/tracy_olson/61056391/

Ask:

- ★ What is the concept of sustainability?
- ★ What are the components of a loan?
- ★ When does a business need to consider additional revenue to cover the cost of loan repayments?
- ★ How does a bank compute interest on a loan?

Vocabulary:

- ★ Revenue
- ★ Monthly installments
- ★ Interest rate

TEKS Mathematical Models w/Applications

111.36.(M).5.(A),(B),(C)

(M.5) The student uses functional relationships to solve problems related to personal income. The student is expected to: (A) use rates, linear functions, and direct variation to solve problems involving personal finance and budgeting, including compensations and deductions; (B) solve problems involving personal taxes; and (C) analyze data to make decisions about banking.

Cross-Curricular TEKS: Banking and Financial Systems 120.43.2.(A),(B),(C)

(2) The student identifies the principal functions of financial institutions.

The student is expected to: (A) compare the functions of financial institutions (banks, savings and loans, credit unions); (B) analyze the process of credit creation and its impact on a single financial institution and on the banking system as a whole; (C) outline different types of credit and the cost of credit; and (D) critique the methods of credit investigation and the concepts related to the use of credit analysis.

Technology Application TEKS: 126.29.7 (C) Solving problems. The student uses appropriate computer-based productivity tools to create and modify solutions to problems. (C) select and integrate appropriate productivity tools including, but not limited to, word processor, database, spreadsheet.

Step 2 – Investigate

[Click here for internet links/URLs](#)

Online Subscription Resources:

From EBSCO: Use search strategies (children and allowances), (children's allowance), (personal finance and money management), (debt and credit cards).

- ★ [Future Debtors of America](#). Preview Consumer Reports, Dec97, Vol. 62 Issue 12, p16, 4p, 6 color; (AN 9711215934)
- ★ [Survey: 80% Of Consumers Fail To Grasp Credit Card Interest](#). Preview CardLine, 5/30/2008, Vol. 8 Issue 22, p28-28, 1p; (AN 32607165)
- ★ [Three Credit Card Traps To Avoid](#). Preview By: Royal, Leslie E. Black Enterprise, Aug2008, Vol. 39 Issue 1, p115-115, 2/3p; (AN 33336973)
- ★ [How To...Get a commercial loan](#) By: Bernadette Starzee. Long Island Business News (Ronkonkoma, NY), 06/13/2008; (AN L54384261LIBN)

Additional Websites:

[Calculating Interest](#); Basic Interest Calculator

Online Financial Games: [Jump Start Your Dream Life](#); [It All Adds Up](#);

Note for Teachers:

- ★ Bookmark the web sites used in the lesson by creating a [Del.icio.us](#) bookmark tag that can be accessed by students at home or school.
- ★ Read EBSCO's article showing how online gaming is used as a teaching tool. [Online Gaming As An Educational Tool In Learning And Training](#). Preview By: de Freitas, Sara; Griffiths, Mark. British Journal of Educational Technology, May2007, Vol. 38 Issue 3, p535-537, 3p; DOI: 10.1111/j.1467-8535.2007.00720.x; (AN 24826078).

Step 3 – Create

[Click here for internet links/URLs](#)

Watch the video clip [Loans for Small Businesses](#). When using media/video clips, provide students with an [Academic Note-Taking Sheet](#) to allow students to identify important points during or after viewing of video segments, Web sites, or other multimedia elements.

- ★ Learn how to calculate [simple interest](#) and solve problems listed on this website. ([Simple interest calculator](#).)
- ★ Use one of the online games to learn concepts of simple interest, saving and living on a budget, and the cost of running a business.

🎮 [Bank it or Bust](#)
🎮 [It Costs What?](#)

🔗 Technology Link -

Video Clip Offline Playback: Loans for Small Businesses: [Download](#) this video clip.

Step 4 – Discuss

[Click here for internet links/URLs](#)

Discuss how loans work:

- ★ Identify the parts of the loan: principal, interest, term, and monthly installment.
- ★ Explain that interest is generally calculated as a percentage of a loan. For example, \$100 is borrowed with a 5% interest rate over a year, \$105 must be repaid (the principal: \$100, + 5% of the \$100 = \$5).
- ★ Give students \$1,000 and break it 12 installments to represent a year. How much is the monthly payment (principal and interest) for the \$1,000? ($\$1,000 \div 12 = \83.33 per month).

Project:

- ✚ Introduce a hypothetical entrepreneur who has decided to start a business selling shoes on the Internet. He has received a loan from a bank to open the business, and will attempt to run his business successfully while making a profit.
- ✚ List some strategies for keeping a business solvent. Have students play the [Rags to Riches](#) online game to create strategies for a successful business.


Technology Link –

Listen to the podcast, [The Starbucks Experience](#)

Step 5 – Reflect

[Click here for internet links/URLs](#)

- ★ Allow students to present their startup business to the rest of the class.
- ★ Have students generate a quarterly report using an Excel spreadsheet as a final assessment. Make sure that the students are familiar with the elements that should belong on the spreadsheet *before* they begin creating their project.

 **Technology Link:** You can also create your own rubric with your students at <http://rubistar.4teachers.org/index.php>.

Internet Links/URLs

Articles may be located by either the accession number (AN) or the persistent URL.

Step 2 – Investigate

- **Future Debtors of America**
<http://search.ebscohost.com/login.aspx?direct=true&db=f5h&AN=9711215934&site=ehost-live>
- **Survey: 80% Of Consumers Fail To Grasp Credit Card Interest**
<http://web.ebscohost.com/ehost/detail?vid=1&hid=5&sid=58be0c07-6de9-4916-8e90-9ab2a347ce76%40sessionmgr11&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#db=bth&AN=32607165>
- **Three Credit Card Traps To Avoid**
<http://web.ebscohost.com/ehost/detail?vid=1&hid=5&sid=c53eec96-3d4a-4df9-8ad2-5f2f6c636371%40sessionmgr10&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#db=bth&AN=33336973>
- **How To...Get a commercial loan**
<http://web.ebscohost.com/ehost/detail?vid=1&hid=5&sid=2350d16b-0502-4b64-89c6-85c7b75055e7%40sessionmgr11&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#db=bwh&AN=L54384261LIBN>
- **Calculating Interest**
<http://www.learningwave.com/lwonline/percent/interest.html>
- **Jump Start Your Dream Life**
http://www.jumpstart.org/madmoney/pgv_money_rc_main.html
- **It All Adds Up**
<http://www.italladdsup.org/>
- **Del.icio.us**
<http://delicious.com/>
- **Online Gaming As An Educational Tool In Learning And Training**
<http://web.ebscohost.com/ehost/detail?vid=1&hid=5&sid=00cf54a5-1f36-459a-b6cb-e936cf8d91e7%40sessionmgr4&bdata=JnNpdGU9ZWZWhvc3QtbGl2ZQ%3d%3d#db=a9h&AN=24826078>

Step 3 – Create

- ***Loans for Small Businesses*** (clip is in the folder with the word doc).
<http://www.thirteen.org/finance/about/video3.zip>
- **Note-Taking Sheet:** Document found at the end of the instructional recipe.
- **Simple interest**
<http://www.learningwave.com/lwonline/percent/interest.html>
- **Simple interest calculator**
<http://www.bygpub.com/finance/InterestCalc.htm>

- **Bank it or Bust**
<http://www.thirteen.org/finance/games/bankorbust.html>
- **It Costs What?**
<http://www.thirteen.org/finance/games/itcostswhat.html>
- **Video Clip Download**
- [Loans for Small Businesses](http://www.thirteen.org/finance/about/video3.zip) (clip is in the folder with the word doc.
<http://www.thirteen.org/finance/about/video3.zip>

Step 4 – Discuss

- **Rags to Riches**
<http://www.thirteen.org/finance/games/ragstoriches.html>
- [The Starbuck Experience](#)

Step 5 – Reflect

- **Rubistar**
<http://rubistar.4teachers.org/index.php>

Academic Notes

DEFINE
CLASSIFY
SERIALIZE

Academic Notes		Date	Period
DEFINE	Base your definition on: • what it <i>does</i> • what it <i>is</i> • what it's made from • what it <i>means</i>		
SUMMARIZE			
SERIALIZE			
CLASSIFY			
COMPARE			
ANALYZE	Be sure to: • consider what the text/ results mean based on critical reading or observation • interpret from multiple perspectives		

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