

WAMC Lesson Plan

Name(s): Ellen Garr

Lesson Title: Savings Accounts

Date: June 25, 2013

Text: Financial Algebra; Section 3-3 Savings Account

Lesson Length: 3 Days

Domain: Creating Equations

Big Idea (Cluster): Understanding how checking accounts work and how to keep an accurate record of account activity.

Common Core State Standards:

A-SSE Interpret the structure of expressions

Level 1 – Interpret expressions that represent a quantity in terms of its context

A-SSE Write expressions in equivalent forms to solve problems

Level 3 – Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression

F-BF Build a function that models a relationship between two quantities

Level 1 – Write a function that describes a relationship between two quantities.

Sublevel a – Determine an explicit expression, a recursive process, or steps for calculation from a context.

A-CED4 Create equations that describe numbers or relationships

Level 4 - Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.

Mathematical Practice(s):

1. Makes sense of problems and persevere in solving them
4. Model with mathematics
5. Use appropriate tools strategically
6. Attend to precision
7. Look for and make use of structure

Content Objectives:

Students will be able to compute simple interest using the simple interest formula.

Language Objectives:

Vocabulary:

- Interest
- Interest rate
- Principal
- Simple interest
- Minimum balance
- Maturity

Connections Prior to Learning

1. Basic equation solving skills.
2. Basic computation skills

Questions to Develop Mathematical Thinking:

- What is the difference between savings, money market, and certificate of deposit (CD) accounts?
- How can interest rates be used to compare banks?
- How can the simple interest formula be manipulated to find different types of information?

Common Misconceptions:

- All savings accounts and banks are equal.
- Just put money into savings to make money.

Assessment (Formative and Summative):

- Formative – Time Machine Lab

WAMC Lesson Plan

- Summative – Simple Interest Formula Quiz

Materials:

- Student Worksheets for Million \$ Mission
- Student Worksheets for Manipulating the Simple Interest Formula
- Student Worksheets for Time Machine Lab
- Simple Interest Formula Quiz

Instruction Plan:

Launch:

Now you know how to keep your spending monitored by balancing your checking account. How do you think you can use your money to make money? Listen to suggestions from the class or use questions to stimulate some wild thinking.

To investigate this we are going to try a mathematics fantasy. Introduce the Million \$ Mission by reading the introduction to the class. At the “Break in the Story” pass out the table and have the students begin on the first week as a class. Comment on the amount. Let the students continue to work, stopping after the second and third weeks to evaluate progress. Discuss after complete.

But this was an actual job. Is it likely to find one like this? Let’s look at some of the other ways we can make out money work for us. Let’s start simple with a simple savings account.

Explore: Manipulating the Simple Interest Formula

Introduce the simple interest formula $I = prt$ as “I pretty”. On board or overhead, define parts and do an example or two to demonstrate. Then pass out the Simple Interest Formula worksheet and have the students complete. This worksheet reviews equation manipulation and vocabulary. They may work in pairs if they wish. When class is finished, have them share with each other.

Have students go through Example 1, page 132, which reviews the fraction, decimal and percent relationship. Do the Check your Understanding on page 132.

Have students do problems #8, 15 -18

Lab:

Have students do the Getting Rich with Time? Lab. Will need copies of student worksheets but no other set up. The purpose of this lab is show how slow the monetary growth is in a simple interest savings program. It will give them a good comparison to compounding as we move into that section.

When I observe students:

During independent, partner, and group activities I walk around the classroom checking for understanding and on task behavior. Asking for questions and explanations gives me feedback on involvement and interest.

Occasionally stop the class to allow students to share quality questions or discoveries.

Summarize: Simple Interest Quiz

Career Application(s):

Simple interest is a good tool to measure the value of other potential investment vehicles. In

WAMC Lesson Plan

order to compare different options one needs a base line which each can be compared to.

21st Century Skills and Interdisciplinary Themes:

21st Century Interdisciplinary themes (Check those that apply to the above activity.)

- Global Awareness Financial/Economic/Business/Entrepreneurial Literacy Civic Literacy
 Health/Safety Literacy Environmental Literacy

21st Century Skills (Check those that students will demonstrate in the above activity.)

LEARNING AND INNOVATION

Creativity and Innovation

- Think Creatively
 Work Creatively with Others
 Implement Innovations

Critical Thinking and Problem Solving

- Reason Effectively
 Use Systems Thinking
 Make Judgments and Decisions
 Solve Problems

Communication and Collaboration

- Communicate Clearly
 Collaborate with Others

INFORMATION, MEDIA & TECHNOLOGY SKILLS

Information Literacy

- Access and Evaluate Information
 Use and manage Information

Media Literacy

- Analyze Media
 Create Media Products
Information, Communications and Technology (ICT Literacy)

- Apply Technology Effectively

LIFE & CAREER SKILLS

Flexibility and Adaptability

- Adapt to Change

- Be Flexible

Initiative and Self-Direction

- Manage Goals and Time

- Work Independently

- Be Self-Directed Learners

Social and Cross-Cultural

- Interact Effectively with

Others

- Work Effectively in Diverse

Teams

Productivity and Accountability

- Manage Projects

- Produce Results

Leadership and Responsibility

- Guide and Lead

Others

- Be Responsible

to Others

Math Council

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