

Topic: Budgeting your time and money

I. Unit Overview and Purpose:

This unit will be a review of statistics, algebra I and geometry materials to understand the benefits of budgeting their time and money so that the students can avoid getting into debt and wasting their time. The students will be using their past knowledge of statistics, equations and percentages to work on these lessons because they build up from their eight grade mathematics content knowledge.

II. Unit Author:

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III. Course:

Mathematical Modeling: Capstone Course
9th grade algebra one
Mathematics across the curriculum
English, Personal Finance and Government

IV. Content Stand:

Algebra and Geometry with a little Data Analysis and Probability (from eight grade)

V. Objectives:

- The students will learn how to make, analyze, and revise their budget and time
- The students will know about budgeting their money and time management skills
- The students will know about personal debt
- The students will learn about effective ways of budgeting their time and money
- The students will learn about ways of staying out of debt

VI. Mathematics Performance Expectation(s):

- MPE.1 Solve practical problems involving rational numbers (including numbers in scientific notation), percents, ratios, and proportions.

VII. Content:

Analysis of personal finances and time management

VIII. Reference/Resource Materials:

- SmartBoard or blackboard
- Calculators for students
- Paper for their projects
- United states census data website for cost of living and salaries
 - http://www.census.gov/compendia/statab/cats/prices/food_cost_and_prices.html

- http://www.census.gov/compendia/statab/cats/prices/consumer_price_indexes_cost_of_living_index.html
- http://www.bls.gov/oes/current/oes_nat.htm#25-0000
- Home or apartment information websites:
 - <http://www.apartments.com/>
 - <http://www.apartmentguide.com/>
- Laptop or computer
- Car cost website
 - <http://www.consumerreports.org/cro/cars/prices/index.htm>
- Worksheets created by instructor

IX. Primary Assessment Strategies:

Group project papers students hand in at the end of the lessons. I will be looking for answers to questions that I will post on the board. There will be questions that I ask them during group and class discussions. Since this is a review, I will be checking for understanding, especially from my ELL, special education and students with learning disabilities.

X. Evaluation Criteria:

Each student must choose a career and answer the questions on paper which they will turn in after the end of the lessons. Students are expected to be engaged during group and class discussions and answer questions about their budgets and schedules. I want the students to be able to demonstrate that they know how to create effective schedules and manage their time wisely. I will check this by grading their group activities at the end of the lesson that they will create on their own.

XI. Instructional Time:

Three one hour classes

Lesson 1

Content Subject Area: Mathematics

Strategy: PAR (Prepare, Assist, Reflect)

Grade Level: 9th grade

Standard: Virginia SOL 8.3, 8.13a and 8.14 review
Virginia SOL A.4d and f and G.11 b

Purpose: To teach students how to use mathematics to help organize their budgets and learn time management skills. To also teach students how they can get into debt and how to stay out of personal debt.

Materials: Computers, SmartBoard/Blackboard/Overhead, Calculators, Review Circle worksheet, questions handout, and Papers for student projects

Preparations: Warm-up class activity (5-7 minutes):

Take the review circle worksheet and fill it in.

You and your future: How the real world works (53- 55 minutes)

Assist: Scenario: You finished college and are planning on moving into your new home after getting a job. Assuming you will be living alone and on your own, please answer the following questions:

I will give the students an example that will show them how to use equations to solve the below questions. Then, I will let them work on it on their own. I will provide websites to use to find information on job salaries, taxes, and cost of other expenses. I will walk around the room to make sure that they are on task and help those who need it. I will ask questions to guide the students to understanding about budgeting and time management skills.

I will give students time to work on the questions using equations, statistics, and percentages.

Next, I will give students a handout of the below questions with space for them to show their work and give them time to answer

Choose a career that you will like to do after you graduate.

- i. What is your monthly and yearly salary?
 - ii. How much does the government take out for taxes?
 - iii. What is your final income after taxes?
- Where do you want to live? What is the rent/mortgage per month?
 - What will be your estimated utilities?
 - What type of car will you like to have? What are the monthly costs?
 - What cellphone and home phone service will you have? What are the costs?

- What cable and internet service will you have? How much will they cost?
- What will be the cost of food (weekly/monthly/yearly)?
- What will be the cost of gas (weekly/monthly/yearly)?
- How much do you want to save for retirement?
- How much do you want to save for personal unexpected expenses?
- What other things do you want to do during the week? Examples are religious, hanging out with friends and family, going to the movies, etc.

- How many hours do you have in a week?
- How many hours a week will you be working? Sleeping?
- How many hours a week do you have to do personal things unrelated to your career? Examples are visiting friends an, going to the gym.

Next, create a diagram or mathematical picture representation of your schedule for one week. Examples are circle graph or bar graph. Create a circle of your budget for one month.

Get into groups and discuss your budgets and how you spend your time. What did you notice? Do you see any changes you will like to make? How will they affect your time and budget presentations?

Reflect: As an exit slip, each student will tell me one thing they learned or one thing they changed and why. They will hand in their circle worksheets and

Note: If students did not finish answering all of their questions, have them do it as homework. You can bold the questions you want them to complete before getting into groups. Make sure that they answer enough questions in order for them to complete their diagrams/mathematical pictures to share with others.

Lesson 2: Class discussion

Materials: questions handout

Preparations: Warm-up activity (5 minute):

What comes to mind when you hear the word debt?

Collect the handout from students who did not complete it from the previous day.

You and your future: How the real world works continues 55 minutes

Assist: Answer the following questions during group (15 minutes) and class discussions (20 minutes). **Make a handout of the below questions with space for student work**

- Why did you choose where you want to live and what car and things you want?
- Are the things you are buying a want or a need?
- Are there any negative numbers or zeros in you calculations? What does it mean?
- Did you have to make any alterations? Why?
- Will you need outside help to live your dream life? Where will they come from?
- What did you notice about how you spent your time?
- Did you notice anything unique about time? What?
- Did you notice the difference between time and money?
- What do you think about your dream future?
 - Are there things you will change or modify to reach your dream future?
 - Are you on track towards reaching your future goals now?
 - What did you learn about budgeting your money and time based on this scenario?

Class discussion: Personal debts and you (20 minutes)

- Base on your previous days' work and today, will you be in debt? Is your schedule too full?
- How did you get into debt and out of time?
- What can you do to avoid it?
- Are there things you will cut back on your budget and schedule?
- Could changing time management prevent debt?

Topics to cover:

- How do you think people get into debts?
- How does this affect the national debt?
- How does debt affect you?
- What are ways to avoid getting into debts?
- What are ways to manage debt?
- How can you better manage and spend your time?
- What and how are ways for you to save your time and money?

Before students leave, tell them about the next days' work. Get them into their groups of 3/4 and give them time to decide which project they want to do. Have them do the research at home for homework.

Lesson 3

Materials: Give each group a large project paper, notebook paper or MS word for notes and markers

Preparations: Continue the previous day's discussion on "Topics to Cover" section (10 minutes)

Assist and Reflect: Group Activity: Students get into groups of 3 or 4 and work on one of two mini projects. I will collect and grade the projects. I will walk around the room, going to and talking with each group and checking their work and understanding. (40 minutes)

Option 1: Planning an event for 30 people.

You are planning an event for 30 people. You are given a budget of \$2,000 and have today to plan it. You are to have a date and schedule of events for this event as well. The event is to take place with a day and can be as long as you want. You are to explain why you choose what you do for this event on a separate sheet of paper to be turn in or email by the end of class.

1. Choose an event to plan. Theme?
2. Where will this event take place?
3. When will this event take place
4. What will you spend the money on?
5. How will time be spent on this event?
 - a. Any delays or exceptions or alternatives to consider?
6. Will you have enough money and time for this event?
 - a. How will you solve this problem?

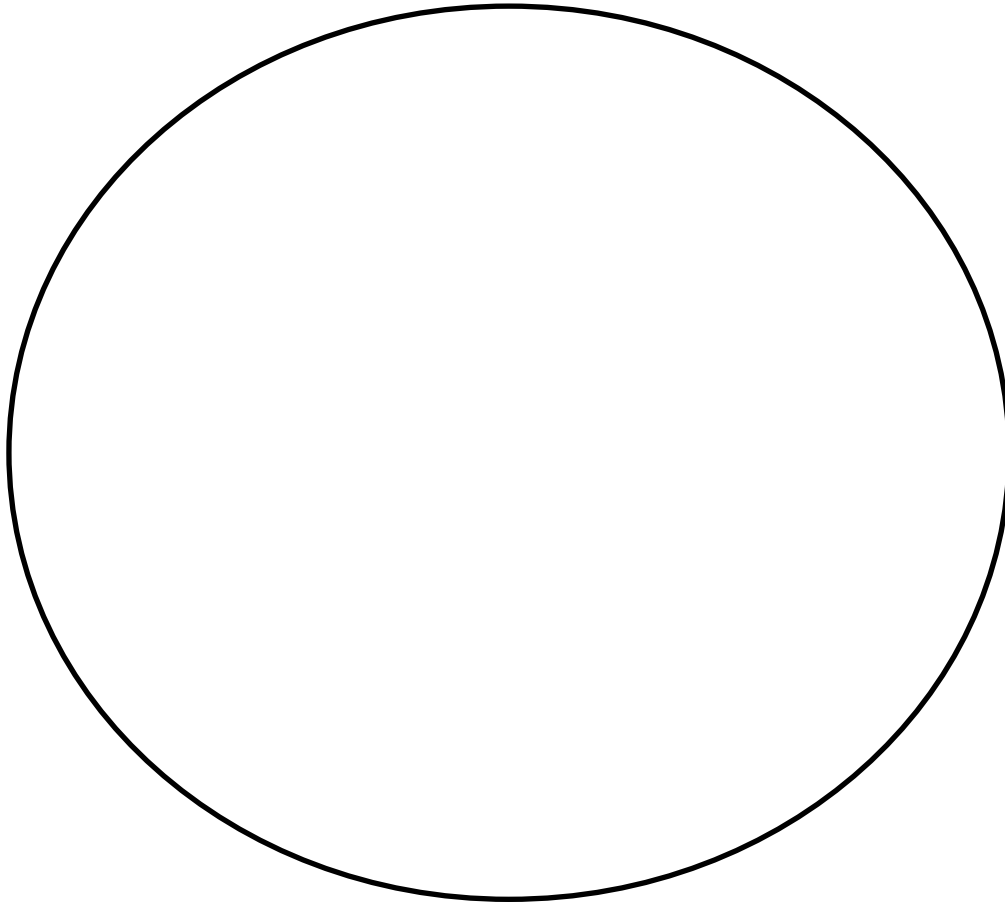
Option 2: You and no more than three friends will be travelling to a location of your choice for vacation by any means you see fit. You will each have \$700 to spend on this vacation. You have one week for this vacation.

1. Where do you want to go?
2. How will you get there?
3. What is your total budget?
4. What will you spend your money on this vacation?
5. How will you spend your time?
 - a. Any delays or exceptions or alternatives to consider?
6. Do you have enough money and time for this vacation?
 - a. How do you solve this problem?

Reflect: You have 10 minutes to write about what you will change in your current life now and why. The change can be in your current spending and/or schedule after school.

Note: I made the dollar amounts given to each option small so that students think about what is really needed in order for them to go to their dream vacation or plan an event. I believe that this will give students the opportunity to learn how to use mathematics and restraints and take responsibility of how they spend their money. It will also show how easy it is to get into conflicts with wants and needs and how to solve such problems.

Circle graph review



Please fill in the circle according to the following:

You have \$60 dollars, you spend

- \$10 on transportation
- 5% on soda at the movies
- 13.8% on food
- \$25 on grocery

Do you have any extra money left? If so, how much?

Grading Rubric

	Excellent 15 points	Good 10 points	Unacceptable 0 point
Class and group work and participation	<ul style="list-style-type: none"> -does all class work and handouts -participates in all group and class discussions -does all the exits slips and warm-ups -answers on handouts are accurate 	<ul style="list-style-type: none"> -does most class work and handouts -participates in most group and class discussions - completes most of the exits slips and warm-ups -answers on handouts are mostly correct 	<ul style="list-style-type: none"> -no work done on any of the handouts -no group and no class participation -does not participates in activities -does not complete tasks
Project	<ul style="list-style-type: none"> -stays within the limits of the project -completes the project -project is clear and organized -members came prepare and work well together -no grammar or mathematical errors 	<ul style="list-style-type: none"> -mostly stays within the limits of the project -project not fully complete - project needs some work -members came prepare but did not work well together -some grammar and mathematical errors -project needs to be resubmitted 	<ul style="list-style-type: none"> -did not stay within the limits of the project -not completed -project not clear or organized -members did not come prepare or work well together -lots of grammar and mathematical errors
Individual project Evaluation	<ul style="list-style-type: none"> -contribute to the overall project -was on task -came prepare for project -worked well with group members 	<ul style="list-style-type: none"> -contribute some work to the project -was off task and needs to be reminded to get on -members came somewhat prepare 	<ul style="list-style-type: none"> -did not work with group members -did not contribute to project -did no work, let others do all the work